

# **West Penn Power Company**

**d/b/a Allegheny Power**



**Pennsylvania Act 129**

**Energy Efficiency and Conservation Plan**

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**Allegheny Power**  
**Energy Efficiency and Conservation Plan**

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**Overview of Plan**

West Penn Power Company d/b/a Allegheny Power (“Allegheny Power” or “the Company”) is a Pennsylvania electric distribution company (“EDC”) providing service in southwestern, south-central and northern Pennsylvania. Allegheny Power serves approximately 715,000 customers in Pennsylvania in an area of about 10,400 square miles with a population of approximately 1.5 million. Allegheny Power is a wholly owned subsidiary of Allegheny Energy, Inc. Allegheny Power and Allegheny Energy, Inc., have corporate headquarters at 800 Cabin Hill Drive, in the City of Greensburg, Westmoreland County, Pennsylvania.

On October 15, 2008, Governor Edward Rendell signed Act 129 of 2008 (“Act 129”), to be effective November 14, 2008. Act 129 requires EDCs with at least 100,000 customers in Pennsylvania to adopt a plan to reduce energy consumption and demand in their service territories. As directed by Act 129 the Pennsylvania Public Utility Commission (“Commission” or “PUC”) entered an Implementation Order on January 16, 2009 at Docket No. M-2008-2069887 establishing standards for EDC plans under Act 129.

Allegheny Power proposes to meet the energy efficiency and conservation requirements of Act 129 with a portfolio of 22 energy-efficiency and conservation (“EE&C”) and demand response (“DR”) programs, and rate offerings, including 11 for the residential sector, 6 for the small commercial and industrial sector, 4 for the large commercial and industrial sector, and 1 for government, school and non-profit customers. Included in Allegheny Power’s plans are measures or programs that target customers in each of the Company’s customer segments – residential, commercial, and industrial - respectively. Most of Allegheny Power’s EE&C and DR measures target the major energy-consuming systems in households and businesses. These systems include, but are not limited to: heating, ventilating and air conditioning (“HVAC”), refrigeration, and clothes washing and drying appliances (“White Goods”) and lighting. Allegheny Power’s EE&C and DR measures and programs have been designed with a sufficiently broad scope and variety to provide opportunity for all of the Company’s Pennsylvania customers to participate and benefit. Many of the Company’s EE&C and DR measures and programs provide customers with rebates or other direct incentives that not only encourage participation but also foster positive behavioral change that in turn creates lasting economic, environmental, and societal benefit.

The Company has sought to develop EE&C and DR programs that are consistent and uniform to minimize customer confusion and leverage customer education regarding energy efficiency and conservation. As a result, included in the Company’s Plan are programs that are proposed by other Pennsylvania EDCs as well as programs offered by the Company in its Maryland service territory. In addition, the Company has pursued discussions with stakeholders and the other Pennsylvania EDCs to develop consistency and uniformity within like programs including equipment eligibility requirements as well as proposed incentive levels and incentive structures. Furthermore, the Company has sought to leverage existing programs and resources in its Plan to avoid competition between like programs that may be available to customers. While variances do exist from EDC to EDC in their programs, the Company believes that these efforts have resulted in consistency and uniformity to the extent possible for this filing.

During the past several years and as part of a nationwide trend, Pennsylvania's energy-consuming citizens and businesses have faced rising prices without the ready ability to decrease their energy use or control costs. The Company's filing herein responds to this issue by providing Allegheny Power customers with robust energy conservation and efficiency tools enabling customers to reduce their electricity consumption and demand with the concomitant opportunity to save money. The measures, programs and rate offerings described in this EE&C and DR filing will help customers adjust their energy use with the aim of reducing overall consumption and decreasing peak demand for electricity.

### ***Demand Response and the Smart Metering Infrastructure***

Many of the data, communications, systems control, and appliance control capabilities discussed in this filing are technology enabled by a group of technologies often described as Advanced Metering Infrastructure (AMI) or Smart Meter infrastructure. In Allegheny Power's Smart Meter Technology Procurement and Installation Plan ("SMIP")<sup>1</sup>, filed on August 14, 2009, the Company provides significantly greater detail about the Smart Meter, Smart Meter infrastructure, technology-based tools, and the costs for these technologies which underpin many of the EE&C and DR programs, measures, and rate offerings described in this filing. The SMIP filing provides more significant detail into how Allegheny Power will enable customers to monitor and effectuate changes in their usage to manage their energy bills. This dynamic, customer driven demand response not only creates economic benefit for individual customers but also places significant downward pressure on regional electricity wholesale capacity and energy prices creating a larger region-wide economic and social benefits. The SMIP also takes customers to a future where Demand Side Management (DSM) programs, focused on both energy efficiency and conservation and demand response, are enabled by new technology investments that best meet customer lifestyles, behaviors, and electricity needs.

Several of the proposed measures and programs in this filing are enhanced by and/or rely on the installation of Smart Meters and Smart Metering infrastructure as well as new rate structures and tariffs. The Company believes that Smart Meters, Smart Metering infrastructure and a set of complementary designed rates and tariffs are essential components of the Company's EE&C and DR plan to meet the mandated consumption and demand reduction targets mandated by Act 129. Well-designed rate structures, implemented in conjunction with Smart Metering infrastructure, will allow customers the opportunity to change their energy usage behavior based on price signals in the electricity market. This filing concentrates on the description of the Company's EE&C and DR programs, measures, and rate offerings. The SMIP filing and other future anticipated rates and tariff filings will provide additional description and detail about the Company's compliance with the requirements of Act 129. The Company is hopeful that its SMIP and tariff filings will be approved in a timely manner in order for the Company to meet its goals.

Customer response to energy prices can be automated and/or manual. The primary purpose of these smart metering efforts is to educate customers on their energy usage and the true cost of electricity and to assist the Company in: 1) achieving Act 129 mandates and 2) learning how to best serve customers who are in turn responding to price signals and saving energy.

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<sup>1</sup> For additional detail and graphical depiction of SMIP, refer to Section 10.F.9



To the extent feasible, the program herein uses technology that has the capability to provide remote meter reading, load research data, and potentially to convey outage detection and voltage monitoring from the customer's residential premise to the utility. The technology will also be able to verify customer compliance with a variety of electricity consumption guidelines and agreements with Allegheny Power established by rates and other EE&C and DR programs.

Most smart metering systems support prepay and back office improvements implemented in concert with smart metering can soften inflexible rules built into existing systems. Smart metering systems also allow customers to be more aware of their energy usage so that they can make more conscious decisions about how to use their energy. By having access to more timely information on their energy usage customers can link the consumption decision to real time, real life activities.<sup>2</sup>

While strongly emphasizing innovation, Allegheny Power's programs are designed to provide pragmatic, actionable results that achieve targets mandated by Act 129 and the energy conservation and DR targets that are likely to be mandated in the near future.

Ultimately, the Company's success in achieving Act 129 goals relies on the combined ability of rates and programs and technology to influence customer behavior and choices about electricity consumption in homes and businesses. From years of experience, the Company knows that each customer will think about, behave and react differently to energy price signals based on individual choice, preference for comfort, or business need. Allegheny Power plans to use a combination of technical and non-technical solutions to influence customer choice and behavior. In the non-technical sphere, the company will use various public media to educate and inform customers of the Company's EE&C and DR programs and rate offerings to achieve customer participation. In the technological realm, this EE&C and DR filing assumes the approval and deployment of Smart Meters and Smart Metering infrastructure plus the use of several new technologies, such as web portals, in-home displays, programmable controllable thermostats, along with the application of email, text messaging and other social networking tools to provide new, innovative ways of communicating with customers and influencing their behavior.

Each of the EE&C and DR measures and programs Allegheny Power has designed was developed with the imperative that customers would: 1) be provided with a participation incentive (e.g., financial and/or environmental); 2) be provided with near real-time information upon which to undertake decision or action; and/or 3) be provided the necessary measurements, control systems, and equipment to receive full benefit in choosing to participate. To this end, the Company's planned technology and non-technical infrastructure and utility business operations must have new capabilities. These new and broad reaching capabilities include, but are not limited to, the capability to:

- 1) Provide multiple means of communicating with customers and registering customer sign ups for the various programs through a web portal, through a customer service representative, and through the integrated voice response system.
- 2) Provide for campaign management for each of the programs.

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<sup>2</sup> For additional detail and graphical depiction of SMIP, refer to Section 10.F.3.

- 3) Provide for measurement of individual compliance to terms of the programs.
- 4) Provide for billing adjustments for various rates, tariff and pricing incentives.
- 5) Provide for service adjustments and additions to customer and account records
- 6) Provide new types of customer service and customer care that are significantly and materially different than the customer care of the past.
- 7) Provide for ongoing reporting of the effectiveness of each EE&C and DR program or measure.
- 8) Provide for continuous improvement in approved EE&C and DR programs and provide for the ability to improve the design of future programs.

While the Company has expended a considerable amount of effort in developing the programs in a manner to best meet the Act 129 targets and requirements, the Company does recognize that all Pennsylvania EDCs will gain valuable experience and knowledge from offering programs to Pennsylvania customers. Allegheny Power recognizes the dynamic nature of EE&C and DR programs and anticipates that the programs will change over time based on this experience and to meet the changing needs of customers, the environment and the Commonwealth. The Company proposes that all Pennsylvania EDCs will need to consider enhancements and revisions on a going forward basis to EE&C and DR programs based on this experience and that all parties will need to work together in order to maximize Plan effectiveness in meeting Act 129 targets and requirements. The Company will conduct stakeholder meetings at least twice annually to discuss any revisions or improvements to the Plan. The Company has also constructed the EE&C and DR plan with flexibility, scalability and adaptability to accommodate new technologies, new programs and new business requirements. Allegheny Power anticipates that once the 2011 and 2013 EE&C and DR goals are met, current and future programs along with the infrastructure investment will enable the Company to achieve potential new targets.

This EE&C and DR filing is a significant effort by the Company to achieve the energy and demand savings goals established under Act 129. The Company believes it will take considerable effort on behalf of all parties to ensure the success of the measures and programs herein submitted. In total, Allegheny Power's portfolio of EE&C and DR measures and programs represents an investment in energy efficiency of \$94.24 million, which will result in approximately 649.1 million kilowatt-hours ("kWh") of net energy savings and 160.3 megawatts ("MW") of net peak demand reduction. While the foundation of the portfolio relies on well established EE&C and DR programs that target the major energy consuming appliances, systems and processes, the projected savings rely on the installation of smart metering infrastructure to support and enable programs and rate offerings for all customer classes, as well as encourage changing customer behavior, with the specific plan components included in the SMIP filing completed on August 14, 2009. The Company is hopeful that its SMIP and tariff filings will be approved in a timely manner in order for the Company to meet its goals.

All programs and measures will be marketed under the Watt Watchers brand. Beginning in 2008, Allegheny started branding its energy efficiency and conservation programs under the Watt Watchers name. Watt Watchers is Allegheny Power's program to help customers learn more about saving energy and money. A brand is a consumer's perception of a product or service. The purpose of our Watt Watchers branding strategy is to build awareness of

Allegheny's programs and demonstrate that our energy efficiency and conservation programs provide value. Messages will be based upon our commitment to customer service and a need to develop programs that will capture the interest of customers. Ultimately, the Company's success in achieving Act 129 goals relies on the combined ability of rates, programs and technology to influence customer behavior and choices about electricity consumption in homes and businesses. For simplicity, the Watt Watchers name is not included in each program and measure name in this filing.<sup>3</sup>

A list of acronyms and abbreviations used in this filing is located in Section 10.F.1.

### **1.1. Summary description of plan, plan objectives, and overall strategy to achieve energy efficiency and conservation goals.**

Allegheny Power has sought to create a portfolio of EE&C and DR programs and rate offerings that enable all customers to participate in one or more programs. The proposed residential programs cover most of the major energy consuming appliances and equipment in the home thus increasing the opportunity for more residential customers to benefit from a measure or program and the attending rate offerings. Likewise, the commercial and industrial programs encompass the core energy consuming appliances, equipment and machinery for commercial and industrial customers. Allegheny Power believes that its approach maximizes the potential for energy and cost savings because the Company's portfolio of programs addresses each energy consuming appliance, system or process across the full spectrum of its customer needs and electricity use cases. It is important to note that:

- The residential demand response programs, in conjunction with the rate offerings, utilize Smart Metering, Smart Metering infrastructure and associated equipment that will be installed at residential customers' homes and will be used to convey energy consumption and price information. The information will enable customers to make informed decisions and manage their monthly energy consumption and their monthly electricity bills.
- The commercial/industrial demand response programs are focused on achieving demand reduction goals by curtailing customer load. By using a mix of load management, customer generation, and/or third-party curtailment service providers, significant demand reduction will be realized.

The proposed EE&C and DR measures, programs, and rate offerings are as shown in the following chart and described as follows:

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<sup>3</sup> See Section 9.2.4. for a detailed description of the Pennsylvania Watt Watchers Energy Efficiency & Conservation Campaign.

Program Name	Energy Efficiency & Conservations	Demand Response	Enabled by Smart Metering Infrastructure	Residential	Residential - Low Income	Small Commercial & Industrial	Large Commercial & Industrial	Governmental & Non-Profit
Residential Energy Star & High Efficiency Appliance Program	X			X	X	X	X	X
Compact Fluorescent Lighting (CFL) Rewards Program	X			X	X	X	X	X
Residential HVAC Efficiency Program	X			X	X			
Residential Home Performance Program	X			X	X			
Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program	X				X			
Residential Low Income Joint Utility Usage Management Program	X				X			
Residential Low Income Room Air Conditioner Replacement Measure	X				X			
Residential Efficiency Rewards Rate	X		X	X	X			
Commercial HVAC Efficiency Program	X					X	X	X
Commercial Lighting Efficiency Program	X					X	X	
Governmental/Non-Profit Lighting Efficiency Program	X							X
Custom Technology Applications Program	X					X	X	X
Programmable Controllable Thermostat (PCT) Program		X	X	X	X	X		X
Pay Ahead Smart Service Rate	X		X	X	X	X	X	X
Commercial and Industrial Drives Program	X					X	X	X
Custom Applications Program	X						X	
Customer Load Response Program		X	X			X	X	X
Customer Resources Demand Response Program		X	X			X	X	X
Distributed Generation Program		X	X			X	X	X
Critical Peak Rebate (CPR) Rate		X	X	X	X	X		X
Time of Use (TOU) Rate with Critical Peak Pricing Rate	X	X	X	X	X	X		X
Hourly Pricing Option (HPO) Rate	X	X	X	X	X	X		X

### Residential Energy Star and High Efficiency Appliance Program

The Energy Star and High Efficiency Appliance Program provides rebates to customers for the purchase of certain appliances that meet or exceed Energy Star or other efficiency ratings.<sup>4</sup> Mail-in and point-of-sale (where possible) rebates will be offered for clothes washers, clothes dryers, dishwashers, refrigerators (with turn-in), programmable thermostats, room air conditioners, room air conditioner recycling and freezers (with turn-in).

### Compact Fluorescent Lighting (CFL) Rewards Program

The Residential CFL Rewards Program provides rebates to customers for the purchase and installation of single and multi-pack CFLs. Mail-in and point-of-sale (where possible) rebates and product markdowns will be offered for single-pack and multi-pack CFLs.

### Residential HVAC Efficiency Program

The Residential HVAC Efficiency Program encourages customers to purchase a high efficiency central air conditioner (CAC) or heat pump (HP) (SEER ratings of 14.5 or

<sup>4</sup> In instances where Energy Star does not provide an efficiency rating for a device, other standards, such as the federal minimum efficiency standards may be used to establish eligibility criteria.

greater). To qualify for the CAC & HP rebates under this program, the work must be completed by a certified contractor and a programmable thermostat must be installed.

### **Residential Home Performance Program**

The Residential Home Performance Program provides a holistic approach to educating customers on energy efficiency and conservation, and to improving overall home performance, by providing customers with educating information and three energy audit measures, including an on-line audit, a check-up audit and a comprehensive audit. Allegheny Power will contract with Building Performance Institute (“BPI”) certified contractors or consultants or leverage third party programs or providers to provide the audits conducted at the home and install standard measures at the time of the audit. At the completion of the audit, the customer will be presented with home energy efficiency and conservation recommendations, including no-cost or low-cost actions, and information regarding Allegheny Power’s other residential program offerings.

### **Residential Low Income Home Performance Check-up Audit and Appliance Replacement Program**

The Residential Low Income Home Performance Check-up Audit and Appliance Replacement Program provides home energy check-up audits and appliance replacement to low income customers with household incomes up to 150% of the federal poverty level. The program will be available to ratepayers who own or rent their residence, including customers residing in multi-family buildings and mobile homes. The program will be offered at no cost to qualified low-income customers. Appliances eligible for replacement include refrigerators and room air conditioners that meet certain qualifications or are inefficient as determined by standard test and/or are in disrepair. Allegheny Power will contract with BPI certified contractors or consultants to provide the audits and install standard measures at the time of the audit.

### **Residential Low Income Joint Utility Usage Management Program**

The Low Income Joint Utility Usage Management Program will initially be a partnership with Columbia Gas, in Pennsylvania, to leverage resources and respective program dollars to provide comprehensive energy saving measures and weatherization services to low-income customers. The program will achieve bill reduction through usage reduction to customers with household incomes up to 200% of the federal poverty level (in excess of current program). The program will be available to ratepayers who own or rent their residence.

### **Residential Low Income Room Air Conditioner Replacement Program**

The Residential Low Income Room Air Conditioner Replacement Program provides replacement of room air conditioners as an add-on to the Company’s existing Low Income Usage Reduction Program (LIURP). The room air conditioner replacement will be offered at no cost to qualified low-income customers in LIURP for room air conditioners that meet certain qualifications. The addition of room air conditioners to LIURP provides the same appliance replacement as currently proposed in the

Company's Low Income Home Performance Program and leverages this program to provide additional measures to low income customers.

### **Residential Efficiency Rewards Rate**

The Residential Efficiency Rewards Rate is a rate offering that encourages residential customers to lower their energy consumption from historical levels through a credit/discount on their bill based on their actual reduction in their energy use. Customers that sign up for this program and lower their energy consumption over a set period of time from the historical period would receive a credit on their electric bill. This rate offering could be competitively neutral to allow customers to continue to pay the same generation charge as on utility-provided default service or from an electric generation supplier.

### **Commercial HVAC Efficiency Program**

The Commercial HVAC Efficiency Program encourages small commercial and industrial and governmental/non-profit customers to purchase high efficiency split system or packaged air conditioners (SEER ratings of 15 or greater) and high efficiency unitary heat pump units (SEER ratings of 15 or greater, and an HSPF of 9.0 or greater) instead of units meeting the current minimum federal standards. To qualify for rebate under this program, the work must be completed by a certified contractor.

### **Commercial Lighting Efficiency Program**

The Commercial Lighting Efficiency Program provides rebates for installing T8 lamps (reducing the number of lamps per fixture by 1 to 2 fewer lamps, installing high-efficiency electronic ballasts or achieving required energy savings), T5 fixtures (replacing High Intensity Discharge ("HID") lights), LED Exit Sign installations and Occupancy Sensors (wall plates controlling interior lighting).

### **Governmental/Non-Profit Lighting Efficiency Program**

The Governmental/Non-Profit Lighting Efficiency Program provides increased incentives to governmental/non-profit customers to install T8 lamps (reducing the number of lamps per fixture by 1 to 2 fewer lamps, install high-efficiency electronic ballasts or achieving required energy savings), LED Traffic Signals, LED Exit Sign installations, and Compact Fluorescent Lights.

### **Custom Technology Applications Program**

The Custom Technology Applications Program is focused on reducing energy and demand in the small and large, commercial and industrial, and governmental/non-profit customer sector for customers with usage of 1M-2.5M kWh/year. The program will focus on improving the energy efficiency for specific processes and applications such as lighting systems, compressed air, chillers, refrigeration, variable speed drives, motors, energy management systems, fan/pumps systems, renewable energy and combined heat-power systems will be considered. The customer or third party provider will identify the energy efficiency and conservation opportunities and will submit projects to Allegheny Power for review and approval. Allegheny Power will provide

incentives to the customer up to 25% of the capital investment, up to \$100,000 of the project, to obtain the energy and demand savings.

### **Programmable Controllable Thermostat (PCT) Program**

The primary purpose of the Programmable Controllable Thermostat (PCT) Program is to automate demand response through direct load control of central air conditioners for residential and small commercial and industrial and governmental/non-profit customers. Smart Metering and associated equipment<sup>5</sup> will be installed to provide communications to the thermostat, thus providing direct load control. Customer response to energy prices may also be automated and/or manual. This program may utilize one of the time-of-use or hourly priced option rates that are being developed.

### **Pay Ahead (Smart) Service Rate**

The Pay Ahead (Smart) Service Rate is a billing option that provides customers with a better understanding of their electric usage, by providing them with information regarding their energy consumption relative to their prepaid account balance, to support their energy use awareness and support their energy efficiency initiatives. Pay Ahead Smart Service requires the installation of a Smart Meter and the associated in-home/in-facility display<sup>6</sup> to provide customers with their energy consumption relative to their prepaid account balance. The Pay Ahead Smart Service Rate is voluntary and is only available to customers that are receiving utility-provided default service and would include all utility charges. Anticipated voluntary participants will be those with high consumption, high bill complaints and college students.

### **Commercial and Industrial Drives Program**

The Commercial and Industrial Drives Program provides rebates to small and large, commercial and industrial and governmental/non-profit customers to improve motor efficiency by applying variable frequency drives on specific loads that have variable torque requirements, such as fans and pumps.

### **Custom Applications Program**

The Custom Applications Program provides energy auditing services and custom incentives for highly specialized processes and applications targeting Allegheny Power's 550 highest-consuming Pennsylvania customers. The Company proposes to use a bidding process to select energy savings projects from large commercial and industrial customers. Allegheny Power will annually issue a request for proposals for energy savings projects of 250,000 kWh/year or greater. Customers will submit their electric energy project proposals, including the amount of the incentive required to complete the project. The Company will review the submittals and pre-qualify customers for this program, by performing a high-level facilities audit to assess the energy project savings potential. For the customers that pre-qualify, Allegheny Power will expend up to \$10,000 per customer for an energy services company to perform a detailed audit of the targeted systems or processes. Allegheny Power will exclude any

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<sup>5</sup> For additional detail and graphical depiction of SMIP, refer to Section 10.F.9.

<sup>6</sup> Ibid

measures from the incentive determination that are not cost-effective, test to assure that the project still meets the minimum load reduction criteria, and accept the proposal or counter with a revised incentive amount. This process will be iterative until such time the targeted annual MWh reductions have been contracted and the annual incentive cap has been reached or proposals are withdrawn by either party, whichever occurs first.

### **Customer Load Response Program**

The Customer Load Response Program is focused on reducing kW demand by providing load management services to small and large commercial and industrial, and governmental/non-profit customers. Under this program, Allegheny Power will act as a “Curtailed Service Provider” and call events to meet a portion of the demand reduction requirements. In addition, Allegheny Power would also act as a Curtailed Service Provider with PJM Interconnection, L.L.C. (“PJM”), to leverage and enroll customer’s load curtailment into PJM’s capacity markets during peak load hours.

### **Customer Resources Demand Response Program**

The Customer Resources Demand Response Program is focused on reducing kW demand by deploying customer load and generation resources. Under this program, Allegheny Power would contract with PJM curtailed service providers for load and generation resources. The PJM curtailed service providers would dispatch the customer resources to meet a portion of the demand reduction requirements during peak load hours.

### **Distributed Generation Program**

The Distributed Generation Program is focused on reducing kW demand by deploying customer-owned standby generation. Under this program, Allegheny Power would contract with a third party dispatchable generation provider that would operate, maintain and dispatch a customer’s standby generator. Based on typical operating scenarios, standby generators are typically used less than 500 hours per year, with 100 of those hours being used for demand response events, with the remaining hours being used by the customer for planned maintenance and/or unplanned outages. In addition, Allegheny will explore the use of alternative fuels such as bio-diesel, or waste methane/landfill gas for these generators. Allegheny will ensure all permitting requirements are adhered to for generators contracted under this program.

### **Critical Peak Rebate (CPR) Rate**

The Critical Peak Rebate (CPR) Rate encourages residential and commercial, industrial, government, school, and non-profit customers under 500 kW to lower their demand and energy consumption during on-peak periods by providing a rebate based on their demand reduction during peak load hours. CPR could be competitively neutral to allow customers to continue to pay the same generation charge as on utility-provided default service or from an electric generation supplier. CPR relies on the installation of a Smart Meter<sup>7</sup> to track the customer’s demand during peak hours, and the addition of

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<sup>7</sup> For additional detail and graphical depiction of SMIP, refer to Section 10.F.9.



an in-home/in-facility display improves customer notification and communication regarding peak periods. Participants will receive additional information to assist them in controlling their demand and their electric bills.

### **Time of Use (TOU) with Critical Peak Pricing Rate**

TOU rates reflect the cost of serving customers during different time periods, but do not change as frequently as hourly. TOU encourages residential and commercial, industrial, government, school, and non-profit customers under 500 kW to lower their demand and energy consumption during on-peak periods by charging a higher price that reflects the higher cost of serving customers, and charging lower prices during off-peak periods that reflects the lower cost of serving customers. TOU also includes critical peak pricing which is designed to address the short-term need to reduce demand at the time of the system peak by charging prices significantly higher than other periods. Critical peak pricing periods will vary in frequency and duration using predefined or notified peak hours, but will balance the need to keep the period as short as possible to effectively allow customers to reduce demand or shift usage to lower cost periods. TOU is voluntary and is only available to customers that are receiving utility-provided default service. TOU relies on the installation of a Smart Meter<sup>8</sup> to track the customer's demand and energy usage during the various TOU periods, and the addition of an in-home/in-facility display improves customer notification/communication regarding peak periods.

TOU is offered as an optional service and does not replace the default service program approved by Commission Order entered July 25, 2008 at Docket No. P-00072342.

### **Hourly Pricing Option (HPO) Rate**

The Hourly Pricing Option (HPO) Rate reflects the different cost of energy during each hour and encourages residential and commercial, industrial, government, school, and non-profit customers under 500 kW to lower their demand and energy consumption during high priced periods and/or shift usage to low priced periods. Billing for the HPO is calculated from the PJM hourly market pricing for the AP Zone, and includes the price of energy, capacity, ancillary services, alternative energy compliance, and any other Federal Energy Regulatory Commission and/or PJM charge directly related to the HPO, as adjusted for taxes. Participants can receive a daily updated approximation of their monthly bill to date (since last bill) and an approximation of their electricity cost for the prior day. The HPO is voluntary and is only available to customers that are receiving utility-provided default service. The HPO requires the installation of a Smart Meter<sup>9</sup> to track the customer's hourly energy consumption, and the addition of an in-home/in-facility display improves customer communications regarding their energy consumption and billing.

The HPO is offered as an optional service and does not replace the default service program approved by Commission order entered July 25, 2008 at Docket No. P-00072342.

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<sup>8</sup> For additional detail and graphical depiction of SMIP, refer to Section 10.F.9.

<sup>9</sup> Ibid

## Overview of Plan -- Conclusion

Allegheny Power's overall Plan is cost effective as required by the Pennsylvania-specific TRC test as set forth by the Commission in its order of June 23, 2009. Table 1 in Section 1.3 of the EE&C Plan shows that the overall Plan as well as the portfolio of programs and measures specific to each customer sector are cost effective. In addition, most programs and measures in the plan have been determined to be cost effective, as illustrated in Table 7 in the Appendices of the EE&C Plan. This Table also depicts the net present value and cost/benefit analysis results required by the Commission. Allegheny Power has focused on choosing and incorporating in its programs those measures that resulted in a TRC test of greater than 1.0. While a few measures were determined to be cost neutral or not cost effective, they were included to determine if real-world performance proves otherwise. Allegheny Power also plans to evaluate all measures upon each annual review and to revise its plan based on actual performance. This maximizes cost-effectiveness of the programs, as it does not dilute the benefits of the most cost-effective measures with those that are not cost-effective.

Allegheny Power strongly believes its approach to EE&C and DR programs and measures maximizes potential energy savings. The Company's portfolio of measures and programs addresses each major energy consuming appliance, system or process across the full spectrum of both customers' usage and customer segments. A key element in the design of the Company's proposed programs is to provide incentives to customers that elect to install more efficient end-use devices. Changing how customers use energy is the ultimate objective. A logical progression in changing customer behavior is first a focus on the deployment of more efficient equipment. Then, over time, the focus shifts to the manner in which equipment or appliances are operated.

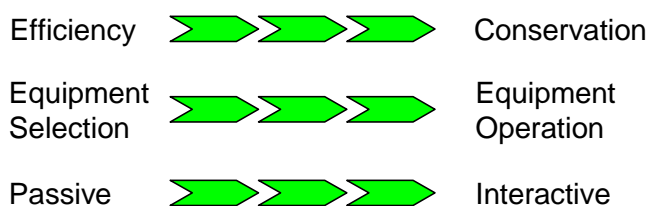
A crucial tool in effecting customer change in behavior is providing customers with information on how they use energy in conjunction with energy prices. Allegheny Power's EE&C and DR Plan relies heavily on the availability of Smart Metering Infrastructure to provide customers with this knowledge.<sup>10</sup>

The figure below illustrates Allegheny Power's programmatic approach to driving customer behavior changes. Please note that the continuum moves from passive customer participation to interactive customer participation, while the program offerings move from targeting equipment efficiency to targeting more efficient appliance and equipment operation.

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<sup>10</sup> For additional detail and graphical depiction of SMIP, refer to Section 10.F.9.

### Programmatic Approach



To effectuate this behavioral transformation, Allegheny Power believes that customers must be provided not just more information, but more real-time information, on which to base operating decisions. Allegheny Power research and review of industry literature reveals that monthly electric bill presentment that provides only aggregated historical consumption and cost data is not a sufficient communication medium and motivator to incent customer behavior change at a scale and scope required to achieve Act 129 EE&C and DR targets. For example, the ability to view the actual and projected costs for individual appliances, such as air conditioning and clothes washing, will enable customers to understand the consequences of their specific electricity consumption and demand decisions and to react to prices in real-time in a way that is concrete and meaningful. Such specific information is also proven to directly impact future decisions, making desirable customer behavior changes durable.

Despite the many demonstrable benefits of customer participation in beneficial EE&C and DR behaviors, Allegheny Power believes, however, that incentive programs are a logical and necessary first step to initiate market transformation and progress towards meeting the mandated reductions under Act 129. Once vendors increase their stock of high-efficiency appliances, or no longer stock standard efficiency appliances (which is reported to have resulted from rebate programs in California), and customers more consistently choose high-efficiency appliances, rebates may be reduced, reallocated to new initiatives such as those encouraging customer behaviors, or eliminated.

Finally, the proliferation of Smart Meter and Smart Grid technology will result in lower costs for the infrastructure, and the market transformation may be completed with the deployment of highly interactive interfaces in customer homes and businesses, that deliver detailed information on individual appliance usage and cost, and real-time pricing information, the extent of which is limited only by budget and imagination.

To catalyze market transformation and meet EE&C and DR targets mandated by Act 129, Allegheny Power is proposing several EE&C and DR programs and rate offerings that require the installation of Smart Metering and Smart Metering infrastructure. The proposed programs that rely on the Smart Metering and Smart Metering infrastructure, or a portion thereof, are:

1. Programmable Controllable Thermostat (PCT),
2. Customer Load Response,
3. Customer Resources Demand Response Program, and

4. Distributed Generation Program.

The rate offerings that rely on Smart Metering and Smart Metering infrastructure, or a portion thereof, include:

1. Residential Efficiency Rewards
2. Pay Ahead Smart Service,
3. Critical Peak Rebate (CPR),
4. Time of Use (TOU) with Critical Peak Pricing, and
5. Hourly Pricing Option (HPO)

The Company plans to file these rate options by the end of 2010 for an effective date in mid-2011.

Through thoughtful program design, Allegheny Power has addressed the main energy consuming appliances, systems and processes impacting EE&C and DR across all customer segments. The Company strongly believes that this group of programs are most likely to achieve the greatest energy consumption savings, demand reductions, and create the most economic, societal and environmental benefits.

Allegheny Power urges the Commonwealth to timely approve cost recovery and other financial incentives for utilities like Allegheny Power that are willing to make significant investments in energy efficiency, energy conservation and demand response. This timely and full cost recovery and incentive is essential until such time that real-time, transparent market signals provided via cost-effective communications infrastructure can appropriately motivate this investment not just for the Company but for utilities across the Commonwealth.

**1.2. Summary description of process used to develop the EE&C plan and key assumptions used in preparing the plan.**

Allegheny Power completed program design with input received from various stakeholders and the output of these collaborative efforts is incorporated in this Plan. Allegheny Power held thirteen formal stakeholder or working group meetings throughout the program development process to solicit stakeholder input and feedback regarding the development of the Company's Act 129 Plan. The stakeholder process also included numerous informal meetings and discussions that provided the Company with valuable input on the proposed programs. The Company looks forward to continuing collaborative efforts to ensure the success of EE&C and DR plan implementation.

Stakeholder Meeting Summary:

- April 8, 2009 – Harrisburg (All interested stakeholders)

- April 23, 2009 – Greensburg (Municipalities)
- May 5, 2009 – Uniontown (Low-Income)
- May 7, 2009 – Butler (Low-Income)
- May 11, 2009 – Harrisburg (Rates)
- May 12 & 13, 2009 – Latrobe, Chamber Fest (residential, low income, and small business customer survey conducted)
- May 13, 2009 – Greensburg (Government)
- June 3, 2009 – Harrisburg (All)
- June 5, 2009 – Williamsport (Seda-Cog)
- June 10, 2009 – Greensburg (Government)
- November 12, 2009 – Connellsville (All)
- November 18, 2009 – Connellsville (All)
- March 19, 2010 – Greensburg (Demand Response)

Allegheny Power has designed its EE&C and DR programs to control and moderate utility program costs and, thereby, limiting costs to customers. Allegheny Power has also sought to limit program development and implementation costs first by performing initial program design and evaluation internally with stakeholder input. Since that time all retained expert resources were procured through competitive bid.

Allegheny Power does not currently have any studies specific to expected participation rates for energy efficiency and conservation and demand response initiatives within its Pennsylvania service territory. For purposes of cost-effective evaluations, a conservative estimation approach to participation rates and energy savings was used to ensure a greater likelihood that the measure or program will remain cost effective throughout its lifecycle. In the case of residential measures, Allegheny Power looked to its 2006 Residential Appliance Saturation Survey to determine the potential pool of participants. With respect to commercial and industrial measures, the Company relied on information from sources such as the Energy Information Administration and the results of pilot studies conducted by other utilities across North America. Within the estimation regime, data was gathered as to incentive levels, program duration, and customer participation. Participation rates were selected somewhat qualitatively from looking at the potential pool of participants, their similarity to the participants of other utilities and the actual take up and participation rates achieved.

Allegheny Power has undertaken benchmarking studies in an effort to ensure the reasonableness and viability of its program proposals. In doing so, numerous utilities (and sometimes their contractors) and end-users were contacted to ascertain the parameters of the programs offered and the relative success of those program offerings. Benchmarking was used to validate and refine assumptions, and the Company generally found that the benchmarking data gathered was convergent. In those instances where outlying data appeared, Allegheny looked further into the cause of those results to

determine if the Company's service territory might have similar characteristics and other correlating factors. Such observation permitted general validation of the assumptions regarding participation levels (both take up and steady state), participation costs and savings estimates from sources such as the EPA, DOE, Northeast Efficiency Partnership ("NEEP"), American Council for an Energy-Efficient Economy ("ACEEE") and the Consortium of Energy Efficiency ("CEE").

Allegheny Power reviewed ACEEE exemplary programs and other utility programs identified through internal benchmarking to determine its incentive strategy. The general approach to setting incentive levels for measures, other than those in the custom programs, was to provide an incentive between 25% to 75% of the incremental cost of the high-efficiency device, with 50% being the target, as compared to the standard efficiency device. The Company's Plan also includes a general reduction in customer incentives beginning in the 2011 Plan year. The Company proposes that as customer awareness and education regarding energy efficiency and conservation increases that smaller customer incentives will be necessary to encourage customers to participate in programs that promote energy efficiency and conservation.



### **1.3. Summary tables of portfolio savings goals, budget and cost-effectiveness <sup>11</sup>**

Allegheny Power proposes to implement energy efficiency programs that are designed to serve the unique needs of its residential, residential low-income and commercial and industrial customers as well as federal, state and local governments, including municipalities, school districts, institutions of higher education and nonprofit entities. Allegheny Power's Plan comports with the requirements of Act 129. Allegheny Power has developed its plan to meet the 2011 and 2013 energy and demand reductions mandated by Act 129. The following table summarizes the programs and their primary targeted customer sector as well as eligibility across customer sectors.

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<sup>11</sup> All Plan Years in summary tables run from June 1<sup>st</sup> of Plan Year in Table through May 31<sup>st</sup> of the following year. It is assumed that there are four program years, each starting June 1 and ending May 31<sup>st</sup>. The first program year (PY) is Program Year 2009 (although it is expected that programs will not start before late 2009 or early 2010), and the last program year is Program Year 2012.

Program Name	EEC	DR	Residential	Residential - Low Income	Small Commercial/Industrial	Large Commercial/Industrial	Governmental/Non-Profit
1 Residential Energy Star & High Efficiency Appliance Program	X						
2 Compact Fluorescent Lighting (CFL) Rewards Program	X						
3 Residential HVAC Efficiency Program	X						
4 Residential Home Performance Program	X						
5 Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program	X						
6 Residential Low Income Joint Utility Usage Management Program	X						
7 Residential Low Income Room Air Conditioner Replacement Measure	X						
8 Residential Efficiency Rewards Rate	X						
9 Commercial HVAC Efficiency Program	X						
10 Commercial Lighting Efficiency Program	X						
11 Governmental/Non-Profit Lighting Efficiency Program	X						
12 Custom Technology Applications Program	X						
13 Programmable Controllable Thermostat (PCT) Program		X					
14 Pay Ahead (Smart) Service Rate	X						
15 Commercial and Industrial Drives Program	X						
16 Custom Applications Program	X						
17 Customer Load Response Program		X					
18 Customer Resources Demand Response Program		X					
19 Distributed Generation Program		X					
20 Critical Peak Rebate (CPR) Rate		X					
21 Time of Use (TOU) Rate with Critical Peak Pricing Rate	X	X					
22 Hourly Pricing Option (HPO) Rate	X	X					

Key	
	Primary Customer Target (Savings & Demand Impacts)
	Eligible Customers (No Impacts)

These programs are projected to provide a total peak electricity demand reduction of 160.3MW by June 1, 2012 and at the conclusion of four years, these programs are projected to achieve a total annual electric energy reduction of 649.1MWh. Should the Commission approve each of the programs recommended by Allegheny Power at the proposed rebate levels and the projected penetration rates are achieved, the annual cost of the programs is estimated to be \$8.3 million for year one, \$25.4 million for year two, \$30.5 million for year 3 and \$30.0 million for year four. The total cost over a four year period is expected to be approximately \$94.24 million, including program start-up expense that includes internal labor related expense, contractor support and tracking database or other IT requirements for a total start-up expense of \$3.2 million. Energy and demand savings, funding levels and cost-effectiveness projections for the programs are as follows:

**Table 1: Portfolio Summary of Lifetime Costs and Benefits**

**Notes:**

o Net Lifetime Benefits, and TRC per the California Standard Practice Manual

<b>Portfolio</b>	<b>Discount Rate</b>	<b>Total Discounted Lifetime Costs (\$000)</b>	<b>Total Discounted Lifetime Benefits (\$000)</b>	<b>Total Discounted Net Lifetime Benefits (\$000)</b>	<b>Cost-Benefit Ratio</b>	<b>TRC[1]</b>
<b>Residential (exclusive of Low Income)</b>	<b>0.08996</b>	<b>\$43,974</b>	<b>\$104,673</b>	<b>\$60,698</b>	<b>2.4</b>	<b>\$60,698</b>
<b>Residential Low-Income</b>	<b>0.08996</b>	<b>\$6,791</b>	<b>\$9,169</b>	<b>\$2,378</b>	<b>1.4</b>	<b>\$2,378</b>
<b>Commercial/Industrial Small</b>	<b>0.08996</b>	<b>\$55,672</b>	<b>\$304,267</b>	<b>\$248,595</b>	<b>5.5</b>	<b>\$248,595</b>
<b>Commercial/Industrial Large</b>	<b>0.08996</b>	<b>\$12,155</b>	<b>\$48,364</b>	<b>\$36,210</b>	<b>4.0</b>	<b>\$36,210</b>
<b>Governmental/Non-Profit</b>	<b>0.08996</b>	<b>\$8,034</b>	<b>\$57,054</b>	<b>\$49,020</b>	<b>7.1</b>	<b>\$49,020</b>
<b>Total</b>	<b>0.08996</b>	<b>\$126,626</b>	<b>\$523,527</b>	<b>\$396,901</b>	<b>4.1</b>	<b>\$396,901</b>



**Table 2: Summary of Portfolio Energy and Demand Savings**

o Program Year is June 1 – May 31

MWh Saved for Consumption Reductions kW Saved for Peak Load Reductions	Program Year 2009		Program Year 2010		Program Year 2011		Program Year 2012		
	MWh Saved	kW Saved	MWh Saved	kW Saved	MWh Saved	kW Saved	MWh Saved	kW Saved	
Baseline <sup>1</sup>	20,938,650	3,496,000	20,938,650	3,496,000	20,938,650	3,496,000	20,938,650	3,496,000	
Residential Sector (exclusive of Low-Income) - Cumulative Projected Portfolio Savings <sup>2</sup>	12,100	1,444	72,891	9,260	168,304	26,682	264,458	52,563	
Residential Low-Income Sector - Cumulative Projected Portfolio Savings <sup>2</sup>	979	154	7,903	1,283	12,902	2,031	17,791	2,753	
Commercial/Industrial Small Sector - Cumulative Projected Portfolio Savings <sup>2</sup>	8,307	1,912	66,236	14,727	167,626	38,869	222,734	50,817	
Commercial/Industrial Large Sector - Cumulative Net Weather Adjusted Savings <sup>2</sup>	399	79	23,514	48,191	59,535	86,959	80,078	90,239	
Governmental/Non-Profit Sector - Cumulative Projected Portfolio Savings <sup>2</sup>	2,842	255	38,903	3,043	57,519	5,797	63,997	7,962	
<b>EE&amp;C Plan Total - Cumulative Projected Savings</b>	<b>24,626</b>	<b>3,844</b>	<b>209,446</b>	<b>76,503</b>	<b>465,886</b>	<b>160,338</b>	<b>649,059</b>	<b>204,334</b>	
Percent Reduction From Baseline	0.1%	0.1%	1.0%	2.2%	2.2%	4.6%	3.1%	5.8%	
Commission Identified Goal			<b>209,387</b>					<b>628,160</b>	<b>157,320</b>
Percent Savings Due to Portfolio Above or Below Commission Goal			<b>100.0%</b>					<b>103.3%</b>	<b>101.9%</b>

Percent Savings Due to Portfolio Above or Below Commission Goal for Demand Reduction Target result of 101.9% is calculated based on results at end of 2011 Plan Year (as of May 2012). See Table 2 (Program Level) in Appendix F.3 for the projections of the energy savings and demand reductions by program year by program, including projections with and without the installation of Smart Meter Infrastructure. The Company utilized the load ratio of the primary target customers with and without existing interval metering in arriving at the projections for each program.

**Table 3: Summary of Portfolio Costs**

o Program year is June 1 – May 31

	Program Year 2009		Program Year 2010		Program Year 2011		Program Year 2012	
	Portfolio Budget	% of Portfolio Budget	Portfolio Budget	% of Portfolio Budget	Portfolio Budget	% of Portfolio Budget	Portfolio Budget	% of Portfolio Budget
Residential Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$3,954,548	48%	\$9,879,822	39%	\$13,420,241	44%	\$13,099,688	44%
Residential Low-Income Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$998,929	12%	\$5,028,741	20%	\$3,439,779	11%	\$4,068,896	14%
Commercial/Industrial Small Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$1,599,326	19%	\$5,164,382	20%	\$7,441,254	24%	\$5,215,874	17%
Commercial/Industrial Large Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$1,324,773	16%	\$2,957,013	12%	\$4,555,696	15%	\$6,515,127	22%
Governmental/Non-Profit Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$433,350	5%	\$2,376,353	9%	\$1,612,518	5%	\$1,150,206	4%
Total Portfolio Annual Budget	\$8,310,926	100%	\$25,406,310	100%	\$30,469,487	100%	\$30,049,790	100%

**1.4. Summary of program implementation schedule over four year plan period (see Chart 1 Notes).**

The chart below summarizes the Plan Schedule. The customer sector charts are located at the end of the Appendix.

**Allegheny Power EE&C and DR Plan Implementation Schedule Summary**

- This chart assumes November 2009 Plan approval  
 - Dates indicated in chart are end dates. Refer to Customer Sector Charts for Start and Complete detail.

Key Activities and Milestones	Pre-Plan		Plan Year - 2009				Plan Year - 2010				Plan Year - 2011				Plan Year - 2012		
	'09 Qtr 1	'09 Qtr 2	'09 Qtr 3	'09 Qtr 4	'10 Qtr 1	'10 Qtr 2	'10 Qtr 3	'10 Qtr 4	'11 Qtr 1	'11 Qtr 2	'11 Qtr 3	'11 Qtr 4	'12 Qtr 1	'12 Qtr 2	'12 Qtr 3	'12 Qtr 4	
<b>Design</b> Portfolio Design and Annual Evaluation	Design						Annual Evaluation Mar-					Annual Evaluation Mar-					Annual Evaluation Mar-
<b>Pre-Implementation</b> Contracts for Implementation Service Vendors		Jun-09				Jun-10											
Contract for EM&V Services Vendors				Dec-10													
EE&C and DR Plan Surcharge Communication				Oct-09													
Surcharge Implementation				Nov-09													
<b>Implementation</b> All Residential Programs not reliant on Smart Metering Infrastructure					Launch Jan-10												
All Commercial/Industrial Small Programs not reliant on Smart Metering Infrastructure					Launch Jan-10												
All Commercial/Industrial Large Programs not reliant on Smart Metering Infrastructure					Launch Jan-10												
All Government/non-Profit Programs not reliant on Smart Metering Infrastructure					Launch Jan-10												
Programmable Controllable Thermostat (PCT) Demand Response Program									Launch Jan-11								
DR Rate Offerings (per SMIP schedule)									Launch Jan-11								
<b>Reports</b> PUC Annual and Plan-end Reporting												Jul-15-11					Jul-15-12

**1.5. Summary description of the EDC implementation strategy to manage EE&C portfolios and engage customers and trade allies.**

Allegheny Power will hire Plan Implementation Providers to administer various components of the Residential programs, Residential Low Income programs, and non-Residential programs. In addition, the Company will contract for some specific services, leveraging contracts for Maryland EE&C Plan Programs where applicable. Allegheny anticipates that some contracts will be performance-based to promote goal achievement. Plan Implementers will be responsible for plan implementation including but not limited to: hiring sub-contractors required for successful program implementation; quality; engaging trade allies; marketing, including customer engagement; reporting on identified metrics including presenting to stakeholder groups as requested; coordinating with contractors hired directly by Allegheny Power for specific services; customer issue handling; and, early identification of program success risks as well as best practices and recommendations to mitigate or leverage.

Allegheny Power plans to meet as required and at least twice per year with stakeholders to review Plan implementation and program details and to consider Plan or program revisions to improve the Plan or programs. Allegheny Power will work for

consensus of the stakeholders and propose consensus positions to the Commission, or alternative recommendations if consensus is not achieved.

**1.6. Summary description of EDCs data management, quality assurance and evaluation processes; include how EE&C plan, portfolios, and programs will be updated and refined based on evaluation results.**

Allegheny Power will comply with data management requirements developed by the statewide Plan Evaluator

Allegheny Power will build quality control checks into each program and measure as well as at key customer touch points. This will include customer surveys; requirements for rebate processors to verify rebate applications; and in field verification of HVAC, lighting, drives, home audits, and custom applications.

A third party contractor will be hired to provide program and overall plan evaluation, measurement, and verification.

A support team responsible for program implementation and EM&V will work closely with the program development group to analyze program results. Once enough data and experience exists to determine with confidence program effectiveness based on results identified changes, enhancements, adjustments, and/or cancellations of programs and measures will be implemented.

**1.7. Summary description of cost recovery mechanism.**

For non-residential customers, Allegheny Power proposes to recover all program costs via a separately stated non-bypassable line-item bill surcharge entitled EE&C Surcharge. For residential customers, EE&C program costs are recovered in addition to the currently approved distribution rates. Following the appendices is a pro-forma tariff for Tariff No. 39 and Tariff No. 37 describing the proposed surcharge, which is provided in accordance with 66 Pa. C.S. §§ 1307 and 2806.1. Allegheny Power respectfully requests Commission approval to begin surcharge recovery effective on one day's notice on the portions of the plan the Commission has approved.

The EE&C Surcharge is designed on a levelized basis over the 43-month period beginning November 2009 and running through May 31, 2013 for all customers except large commercial and industrial customers. The EE&C Surcharge for large commercial and industrial customers is designed on a levelized basis over the 40-month period beginning February 2010 and running through May 31, 2013. Subject to the annual reconciliation mechanism described below, the implementation of a levelized surcharge helps mitigate the peaks and valleys that may otherwise occur if the surcharge had not been designed on a levelized basis.

Allegheny Power will submit to the Commission by March 31 of each year: (1) a comparison between forecasted revenues billed and actual revenues billed through February, as adjusted for removal of gross receipts tax; (2) any adjustment to the forecasted revenues anticipated to be billed during March through May, as adjusted for

removal of gross receipts tax; (3) any adjustment to the costs levelized over the 43-month period (or 40-month period for large commercial and industrial customers) based upon actual costs incurred through February and any revised estimates for future months, up to the amount permitted to be recovered under Act 129; and (4) the subsequent reconciliation effect to the surcharge adjusted for gross receipts tax, and levelized over the period of the upcoming June 1 and continuing through the remaining months of the surcharge. A final reconciliation of amounts to be collected or refunded after May 31, 2013, through a further surcharge, should be authorized by the Commission. The purpose of this annual reconciliation mechanism is to mitigate the magnitude of the reconciliation balance. The EE&C Surcharge calculations in this filing are based upon Allegheny Power's annual reconciliation submitted to the Commission on March 31, 2010. Commission approval of this annual reconciliation mechanism to ensure dollar for dollar recovery of all prudently incurred costs through May 31, 2013, with a projected aggregated cost of \$94.24 million, will allow the Company to utilize regulatory accounting to properly match surcharge revenue with the program costs. Allegheny Power is requesting authorization for regulatory accounting to track on a dollar for dollar basis the amounts to be recovered on a deferred basis for any under-collections, or refunded on a deferred basis any over-collections, that may occur throughout the lifespan of the surcharge, which can arise because of the levelized nature of the surcharge.

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**Energy Efficiency Portfolio/Program Summary Tables and Charts**

**2.1. Residential, Commercial/Industrial Small, Commercial/Industrial Large and Governmental/Non-profit Portfolio Summaries (see Table 4).**

Table 4: Program Summaries

	Program Name	Program Market	Program Two Sentence Summary	Program Years Operated	Net Lifetime MWh Savings	Net Peak Demand kW Savings	Percentage of Portfolio and Total Lifetime MWh savings	
<b>Residential Portfolio Programs (exclusive of Low Income)</b>	<i>Compact Fluorescent Lighting (CFL) Rewards Program</i>	All residential customers	A rebate program that encourages the purchase of single and multipack CFL's. Mail-in rebates and point-of-sale discounts (where possible) will be offered.	4	627,810	339	39%	9%
	<i>Critical Peak Rebate (CPR) Rate</i>	All residential customers with Smart Metering	A rebate rate offering that encourages customers to lower their energy demand during peak load hours by offering a rebate based on their actual energy demand.	3	2,497	9,513	0%	0%
	<i>Residential Energy Star and High Efficiency Appliance Program</i>	All residential customers	A rebate program that encourages the purchase of certain appliances that meet or exceed Energy Star or other efficiency ratings, through mail-in rebates.	4	440,219	19,894	27%	7%
	<i>Residential Home Performance Program</i>	Single family or multifamily residential dwelling units.	A program that educates customers on EE&C and improves overall home performance by promoting and providing the installation of standard EE&C measures. Includes three home energy audit options. Encourages additional qualified measures through mail-in rebate.	4	462,042	6,418	29%	7%
	<i>Programmable Controllable Thermostat (PCT) Program</i>	All residential customers with Smart Metering	A program that provides automated demand response and reduces energy usage during peak load hours through the direct load control of air conditioners. Customers will receive a credit on their bill for participation in this program.	3	2,497	9,513	0%	0%
	<i>Residential HVAC Efficiency Program</i>	All residential customers with air conditioners or heat pumps.	A rebate program that encourages customers to purchase high efficiency air conditioners or heat pumps. Mail-in rebates will be offered for central air conditioners or heat pumps that exceed certain efficiency ratings.	4	69,152	5,515	4%	1%
	<i>Residential Efficiency Rewards Rate</i>	All residential customers with Smart Metering	A rate offering that encourages customers to lower their energy consumption from historical levels. Customers will be provided a credit/discount on their bill based on their actual reduction in energy usage.	3	11,024	959	1%	0%
	<i>Pay Ahead Smart Service Rate</i>	All residential customers with Smart Metering	A billing option that provides customers with a better understanding of their energy usage and the impact on their electric bill. Customers will be provided information regarding their energy usage and account balance to support customer efficiency initiatives.	3	4,724	411	0%	0%
Totals for Residential Sector					1,619,964	52,563	100%	24%
<b>Residential Low-Income Sector Programs</b>	<i>Residential Low Income Home Performance Check-Up Audit &amp; Appliance Replacement Program</i>	Residential customers up to 150% of the federal poverty level.	A program that educates customers on EE&C and improves overall home performance by providing the installation of EE&C measures. Includes replacement of refrigerators and room air conditioners that meet certain qualifications.	4	36,427	1,193	26%	1%
	<i>Residential Low Income Joint Utility Usage Management Program</i>	Residential customers up to 200% of the federal poverty level.	A program that leverages resources and funding to provide comprehensive energy saving measures and weatherization services to low income customers through partnership with gas utilities.	4	101,868	1,210	72%	2%
	<i>Residential Low Income Room Air Conditioner Replacement Measure</i>	Residential Low Income Usage Reduction Program (LIURP) customers.	A program that provides replacement of room air conditioners meeting certain qualifications as an add-on to the Company's existing Low Income Usage Reduction Program.	4	4,010	351	3%	0%
Totals for Low-Income Sector					142,305	2,753	100%	2%
<b>Governmental / Non-Profit Portfolio Programs</b>	<i>Governmental/Non-Profit Lighting Efficiency Program</i>	All government, school and non-profit customers with lighting.	A rebate program that encourages customers to upgrade lighting systems to more efficiency lighting technologies. Mail-in rebates and/or product buy-downs will be offered for certain lighting replacements or installations including CFL's, T8, LED Exit Signs and LED Traffic Signals.	4	588,345	7,962	100%	9%
	Totals for Gov't/NP Sector Programs					588,345	7,962	100%



	Program Name	Program Market	Program Two Sentence Summary	Program Years Operated	Net Lifetime MWh Savings	Net Peak Demand kW Savings	Percentage of Portfolio and Total Lifetime MWh savings	
Commercial/ Industrial Small Portfolio Programs	Commercial HVAC Efficiency Program	Small commercial and industrial and governmental/non-profit customers with air conditioners or heat pumps.	A rebate program that encourages customers to purchase high efficiency air conditioners or heat pumps. Mail-in rebates will be offered for central air conditioners or heat pumps that exceed certain efficiency ratings.	4	60,246	2,522	2%	1%
	Commercial Lighting Efficiency Program	Small and large commercial and industrial and governmental/non-profit customers with lighting.	A rebate program that encourages customers to upgrade lighting systems to more efficiency lighting technologies. Mail-in rebates will be offered for certain lighting replacements or installations including T8, T5, LED Exit Sign and Occupancy Sensors.	4	3,047,224	42,701	94%	46%
	Contracted Demand Response Program	Small and large commercial and industrial customers and governmental/non-profit customers.	A program that provides demand response with participating customers through a third party demand response provider. Customers will receive payment for their participation in demand response events.	0	0	0	0%	0%
	Custom Technology Applications Program	Small and large commercial and industrial customers and governmental/non-profit customers.	An incentive program that encourages energy and demand reductions by providing incentives for qualified projects that improve energy efficiency of customer processes and applications.	3	127,876	2,235	4%	2%
	Time of Use (TOU) with Critical Peak Pricing Rate	Small commercial and industrial customers and governmental/non-profit customers, with Smart Metering.	A rate offering that encourages customers to lower their demand and energy consumption during on-peak and peak load periods by charging a higher price during these periods and a lower price during off-peak periods, that reflects the cost of serving customers during these periods.	3	7,638	2,856	0%	0%
	Hourly Pricing Option (HPO) Rate	Small commercial and industrial customers and governmental/non-profit customers, with Smart Metering.	A rate offering that encourages customers to lower their demand and energy consumption during higher priced periods and/or shift usage to lower priced periods. Billing is calculated from the PJM hourly market pricing for the AP zone.	3	1,348	504	0%	0%
Totals for C/I Small Sector					3,244,333	50,817	100%	48%
Commercial/ Industrial Large Portfolio Programs	Custom Applications Program	Large commercial and industrial customers with at least 2,500,000 kWh's energy usage per year.	An incentive program that encourages energy and demand reductions by providing incentives for qualified projects that improve energy efficiency of customer processes and applications.	3	901,721	11,793	82%	13%
	Customer Load Response Program	Small and large commercial and industrial customers and governmental/non-profit customers, with Smart Metering.	A program that provides demand response with participating customers by contracting with customers for load reduction during peak load hours. Customers will receive payment for their participation in Company demand response events.	3	5,100	29,000	0%	0%
	Customer Resources Demand Response Program	Small and large commercial and industrial customers and governmental/non-profit customers	A program that provides demand response with participating customers by deploying customer load during peak load hours. The Company will contract with PJM curtailment service providers for load resources for participation in Company demand response events.	3	7,250	40,000	1%	0%
	Distributed Generation Program	Small and large commercial and industrial customers and governmental/non-profit customers, with stand-by generation resources.	A program that provides demand response with participating customers by deploying customer-owned standby generation during peak load hours. The Company will contract with a third party dispatchable generation provider to operate, maintain and dispatch a customer's standby generator.	3	1,250	7,000	0%	0%
	Commercial and Industrial Drives Program	Small and large commercial and industrial customers and governmental/non-profit customers.	A rebate program that improves customer process efficiency by applying variable frequency drives to existing applications or process loads. Mail-in rebates will be offered for qualifying installations.	4	185,456	2,446	17%	3%
Totals for C/I Large Sector					1,100,777	90,239	100%	16%
<b>Total for Plan</b>					<b>6,695,723</b>	<b>204,334</b>	<b>100%</b>	

**2.2. Plan data: Costs, Cost-effectiveness and Savings by program, sector and portfolio (see Tables 1-4).**

**Table 1: Portfolio Summary of Lifetime Costs and Benefits**

**Notes:**

o Net Lifetime Benefits, and TRC per the California Standard Practice Manual

<b>Portfolio</b>	<b>Discount Rate</b>	<b>Total Discounted Lifetime Costs (\$000)</b>	<b>Total Discounted Lifetime Benefits (\$000)</b>	<b>Total Discounted Net Lifetime Benefits (\$000)</b>	<b>Cost-Benefit Ratio</b>	<b>TRC[1]</b>
<b>Residential (exclusive of Low Income)</b>	<b>0.08996</b>	<b>\$43,974</b>	<b>\$104,673</b>	<b>\$60,698</b>	<b>2.4</b>	<b>\$60,698</b>
<b>Residential Low-Income</b>	<b>0.08996</b>	<b>\$6,791</b>	<b>\$9,169</b>	<b>\$2,378</b>	<b>1.4</b>	<b>\$2,378</b>
<b>Commercial/Industrial Small</b>	<b>0.08996</b>	<b>\$55,672</b>	<b>\$304,267</b>	<b>\$248,595</b>	<b>5.5</b>	<b>\$248,595</b>
<b>Commercial/Industrial Large</b>	<b>0.08996</b>	<b>\$12,155</b>	<b>\$48,364</b>	<b>\$36,210</b>	<b>4.0</b>	<b>\$36,210</b>
<b>Governmental/Non-Profit</b>	<b>0.08996</b>	<b>\$8,034</b>	<b>\$57,054</b>	<b>\$49,020</b>	<b>7.1</b>	<b>\$49,020</b>
<b>Total</b>	<b>0.08996</b>	<b>\$126,626</b>	<b>\$523,527</b>	<b>\$396,901</b>	<b>4.1</b>	<b>\$396,901</b>

**Table 2: Summary of Portfolio Energy and Demand Savings**

o Program Year is June 1 – May 31

MWh Saved for Consumption Reductions kW Saved for Peak Load Reductions	Program Year 2009		Program Year 2010		Program Year 2011		Program Year 2012		
	MWh Saved	kW Saved	MWh Saved	kW Saved	MWh Saved	kW Saved	MWh Saved	kW Saved	
Baseline <sup>1</sup>	20,938,650	3,496,000	20,938,650	3,496,000	20,938,650	3,496,000	20,938,650	3,496,000	
Residential Sector (exclusive of Low-Income) - Cumulative Projected Portfolio Savings <sup>2</sup>	12,100	1,444	72,891	9,260	168,304	26,682	264,458	52,563	
Residential Low-Income Sector - Cumulative Projected Portfolio Savings <sup>2</sup>	979	154	7,903	1,283	12,902	2,031	17,791	2,753	
Commercial/Industrial Small Sector - Cumulative Projected Portfolio Savings <sup>2</sup>	8,307	1,912	66,236	14,727	167,626	38,869	222,734	50,817	
Commercial/Industrial Large Sector - Cumulative Net Weather Adjusted Savings <sup>2</sup>	399	79	23,514	48,191	59,535	86,959	80,078	90,239	
Governmental/Non-Profit Sector - Cumulative Projected Portfolio Savings <sup>2</sup>	2,842	255	38,903	3,043	57,519	5,797	63,997	7,962	
<b>EE&amp;C Plan Total - Cumulative Projected Savings</b>	<b>24,626</b>	<b>3,844</b>	<b>209,446</b>	<b>76,503</b>	<b>465,886</b>	<b>160,338</b>	<b>649,059</b>	<b>204,334</b>	
Percent Reduction From Baseline	0.1%	0.1%	1.0%	2.2%	2.2%	4.6%	3.1%	5.8%	
Commission Identified Goal			<b>209,387</b>					<b>628,160</b>	<b>157,320</b>
Percent Savings Due to Portfolio Above or Below Commission Goal			<b>100.0%</b>					<b>103.3%</b>	<b>101.9%</b>

Percent Savings Due to Portfolio Above or Below Commission Goal for Demand Reduction Target result of 101.9% is calculated based on results at end of 2011 Plan Year (as of May 2012). See Table 2 (Program Level) in Appendix F.3 for the projections of the energy savings and demand reductions by program year by program, including projections with and without the installation of Smart Meter Infrastructure. The Company utilized the load ratio of the primary target customers with and without existing interval metering in arriving at the projections for each program.

**Table 3: Summary of Portfolio Costs**

o Program year is June 1 – May 31

	Program Year 2009		Program Year 2010		Program Year 2011		Program Year 2012	
	Portfolio Budget	% of Portfolio Budget	Portfolio Budget	% of Portfolio Budget	Portfolio Budget	% of Portfolio Budget	Portfolio Budget	% of Portfolio Budget
Residential Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$3,954,548	48%	\$9,879,822	39%	\$13,420,241	44%	\$13,099,688	44%
Residential Low-Income Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$998,929	12%	\$5,028,741	20%	\$3,439,779	11%	\$4,068,896	14%
Commercial/Industrial Small Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$1,599,326	19%	\$5,164,382	20%	\$7,441,254	24%	\$5,215,874	17%
Commercial/Industrial Large Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$1,324,773	16%	\$2,957,013	12%	\$4,555,696	15%	\$6,515,127	22%
Governmental/Non-Profit Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$433,350	5%	\$2,376,353	9%	\$1,612,518	5%	\$1,150,206	4%
Total Portfolio Annual Budget	\$8,310,926	100%	\$25,406,310	100%	\$30,469,487	100%	\$30,049,790	100%

Table 4: Program Summaries

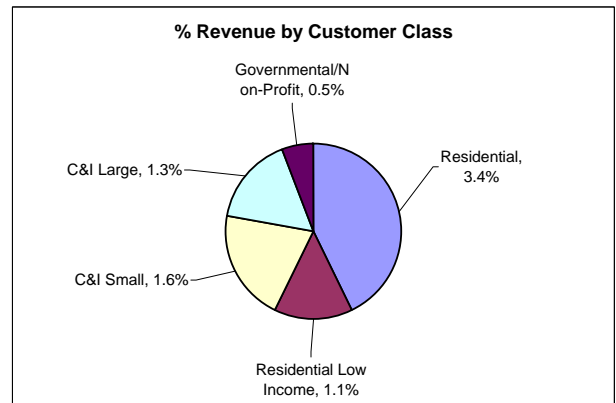
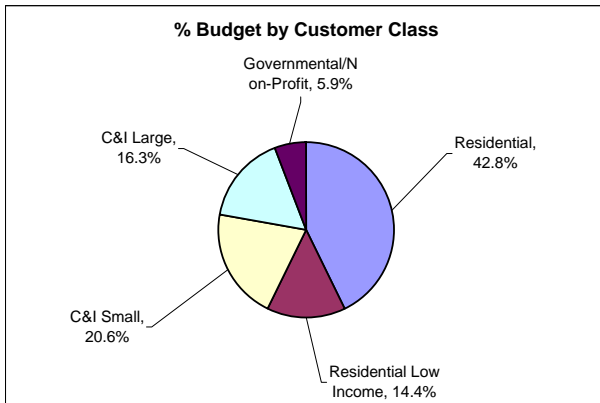
	Program Name	Program Market	Program Two Sentence Summary	Program Years Operated	Net Lifetime MWh Savings	Net Peak Demand kW Savings	Percentage of Portfolio and Total Lifetime MWh savings	
<b>Residential Portfolio Programs (exclusive of Low Income)</b>	<i>Compact Fluorescent Lighting (CFL) Rewards Program</i>	All residential customers	A rebate program that encourages the purchase of single and multipack CFL's. Mail-in rebates and point-of-sale discounts (where possible) will be offered.	4	627,810	339	39%	9%
	<i>Critical Peak Rebate (CPR) Rate</i>	All residential customers with Smart Metering	A rebate rate offering that encourages customers to lower their energy demand during peak load hours by offering a rebate based on their actual energy demand.	3	2,497	9,513	0%	0%
	<i>Residential Energy Star and High Efficiency Appliance Program</i>	All residential customers	A rebate program that encourages the purchase of certain appliances that meet or exceed Energy Star or other efficiency ratings, through mail-in rebates.	4	440,219	19,894	27%	7%
	<i>Residential Home Performance Program</i>	Single family or multifamily residential dwelling units.	A program that educates customers on EE&C and improves overall home performance by promoting and providing the installation of standard EE&C measures. Includes three home energy audit options. Encourages additional qualified measures through mail-in rebate.	4	462,042	6,418	29%	7%
	<i>Programmable Controllable Thermostat (PCT) Program</i>	All residential customers with Smart Metering	A program that provides automated demand response and reduces energy usage during peak load hours through the direct load control of air conditioners. Customers will receive a credit on their bill for participation in this program.	3	2,497	9,513	0%	0%
	<i>Residential HVAC Efficiency Program</i>	All residential customers with air conditioners or heat pumps.	A rebate program that encourages customers to purchase high efficiency air conditioners or heat pumps. Mail-in rebates will be offered for central air conditioners or heat pumps that exceed certain efficiency ratings.	4	69,152	5,515	4%	1%
	<i>Residential Efficiency Rewards Rate</i>	All residential customers with Smart Metering	A rate offering that encourages customers to lower their energy consumption from historical levels. Customers will be provided a credit/discount on their bill based on their actual reduction in energy usage.	3	11,024	959	1%	0%
	<i>Pay Ahead Smart Service Rate</i>	All residential customers with Smart Metering	A billing option that provides customers with a better understanding of their energy usage and the impact on their electric bill. Customers will be provided information regarding their energy usage and account balance to support customer efficiency initiatives.	3	4,724	411	0%	0%
Totals for Residential Sector					1,619,964	52,563	100%	24%
<b>Residential Low-Income Sector Programs</b>	<i>Residential Low Income Home Performance Check-Up Audit &amp; Appliance Replacement Program</i>	Residential customers up to 150% of the federal poverty level.	A program that educates customers on EE&C and improves overall home performance by providing the installation of EE&C measures. Includes replacement of refrigerators and room air conditioners that meet certain qualifications.	4	36,427	1,193	26%	1%
	<i>Residential Low Income Joint Utility Usage Management Program</i>	Residential customers up to 200% of the federal poverty level.	A program that leverages resources and funding to provide comprehensive energy saving measures and weatherization services to low income customers through partnership with gas utilities.	4	101,868	1,210	72%	2%
	<i>Residential Low Income Room Air Conditioner Replacement Measure</i>	Residential Low Income Usage Reduction Program (LIURP) customers.	A program that provides replacement of room air conditioners meeting certain qualifications as an add-on to the Company's existing Low Income Usage Reduction Program.	4	4,010	351	3%	0%
	Totals for Low-Income Sector					142,305	2,753	100%
<b>Governmental / Non-Profit Portfolio Programs</b>	<i>Governmental/Non-Profit Lighting Efficiency Program</i>	All government, school and non-profit customers with lighting.	A rebate program that encourages customers to upgrade lighting systems to more efficiency lighting technologies. Mail-in rebates and/or product buy-downs will be offered for certain lighting replacements or installations including CFL's, T8, LED Exit Signs and LED Traffic Signals.	4	588,345	7,962	100%	9%
	Totals for Gov't/NP Sector Programs					588,345	7,962	100%

	Program Name	Program Market	Program Two Sentence Summary	Program Years Operated	Net Lifetime MWh Savings	Net Peak Demand kW Savings	Percentage of Portfolio and Total Lifetime MWh savings	
Commercial/ Industrial/ Small Portfolio Programs	Commercial HVAC Efficiency Program	Small commercial and industrial and governmental/non-profit customers with air conditioners or heat pumps.	A rebate program that encourages customers to purchase high efficiency air conditioners or heat pumps. Mail-in rebates will be offered for central air conditioners or heat pumps that exceed certain efficiency ratings.	4	60,246	2,522	2%	1%
	Commercial Lighting Efficiency Program	Small and large commercial and industrial and governmental/non-profit customers with lighting.	A rebate program that encourages customers to upgrade lighting systems to more efficiency lighting technologies. Mail-in rebates will be offered for certain lighting replacements or installations including T8, T5, LED Exit Sign and Occupancy Sensors.	4	3,047,224	42,701	94%	46%
	Contracted Demand Response Program	Small and large commercial and industrial customers and governmental/non-profit customers.	A program that provides demand response with participating customers through a third party demand response provider. Customers will receive payment for their participation in demand response events.	0	0	0	0%	0%
	Custom Technology Applications Program	Small and large commercial and industrial customers and governmental/non-profit customers.	An incentive program that encourages energy and demand reductions by providing incentives for qualified projects that improve energy efficiency of customer processes and applications.	3	127,876	2,235	4%	2%
	Time of Use (TOU) with Critical Peak Pricing Rate	Small commercial and industrial customers and governmental/non-profit customers, with Smart Metering.	A rate offering that encourages customers to lower their demand and energy consumption during on-peak and peak load periods by charging a higher price during these periods and a lower price during off-peak periods, that reflects the cost of serving customers during these periods.	3	7,638	2,856	0%	0%
	Hourly Pricing Option (HPO) Rate	Small commercial and industrial customers and governmental/non-profit customers, with Smart Metering.	A rate offering that encourages customers to lower their demand and energy consumption during higher priced periods and/or shift usage to lower priced periods. Billing is calculated from the PJM hourly market pricing for the AP zone.	3	1,348	504	0%	0%
Totals for C/I Small Sector					3,244,333	50,817	100%	48%
Commercial/ Industrial Large Portfolio Programs	Custom Applications Program	Large commercial and industrial customers with at least 2,500,000 kWh's energy usage per year.	An incentive program that encourages energy and demand reductions by providing incentives for qualified projects that improve energy efficiency of customer processes and applications.	3	901,721	11,793	82%	13%
	Customer Load Response Program	Small and large commercial and industrial customers and governmental/non-profit customers, with Smart Metering.	A program that provides demand response with participating customers by contracting with customers for load reduction during peak load hours. Customers will receive payment for their participation in Company demand response events.	3	5,100	29,000	0%	0%
	Customer Resources Demand Response Program	Small and large commercial and industrial customers and governmental/non-profit customers	A program that provides demand response with participating customers by deploying customer load during peak load hours. The Company will contract with PJM curtailment service providers for load resources for participation in Company demand response events.	3	7,250	40,000	1%	0%
	Distributed Generation Program	Small and large commercial and industrial customers and governmental/non-profit customers, with stand-by generation resources.	A program that provides demand response with participating customers by deploying customer-owned standby generation during peak load hours. The Company will contract with a third party dispatchable generation provider to operate, maintain and dispatch a customer's standby generator.	3	1,250	7,000	0%	0%
	Commercial and Industrial Drives Program	Small and large commercial and industrial customers and governmental/non-profit customers.	A rebate program that improves customer process efficiency by applying variable frequency drives to existing applications or process loads. Mail-in rebates will be offered for qualifying installations.	4	185,456	2,446	17%	3%
Totals for C/I Large Sector					1,100,777	90,239	100%	16%
<b>Total for Plan</b>					<b>6,695,723</b>	<b>204,334</b>	<b>100%</b>	

2.3. Budget and Parity Analysis – (see Table 5).

**Table 5: Budget and Parity Analysis Summary**  
 o Through program year 2012

Customer Class	Budget	% of Total EDC Budget	% of Total Budget Excluding Other Expenditures	% of Total Customer Revenue	Difference
Residential	\$40,354,300	43%	43%	3.4%	39.4%
Residential Low Income	\$13,536,344	14%	14%	1.1%	13.2%
<b>Residential Subtotal</b>	<b>\$ 53,890,644</b>	<b>57%</b>	<b>57%</b>	<b>4.6%</b>	<b>52.6%</b>
C&I Small	\$19,420,835	21%	21%	1.6%	19.0%
C&I Large	\$15,352,608	16%	16%	1.3%	15.0%
<b>C&amp;I Subtotal</b>	<b>\$ 34,773,444</b>	<b>37%</b>	<b>37%</b>	<b>3.0%</b>	<b>33.9%</b>
Governmental/Non-Profit	\$5,572,427	6%	6%	0.5%	5.4%
<b>Governmental/Non-Profit Subtotal</b>	<b>\$ 5,572,427</b>	<b>6%</b>	<b>6%</b>	<b>0.5%</b>	<b>5.4%</b>
<b>Residential/C&amp;I/Governmental/Non-Profit Subtotal</b>	<b>\$ 94,236,514</b>	<b>100%</b>	<b>100%</b>	<b>\$1,178,130,105</b>	
Other Expenditures		0%			
<b>Other Expenditures Subtotal</b>	<b>0</b>	<b>0</b>			
<b>EDC TOTAL</b>	<b>\$ 94,236,514</b>	<b>100%</b>			



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### 3. Program Descriptions

#### 3.1. Discussion of criteria and process used for selection of programs:

##### 3.1.1 Describe portfolio objectives and metrics that define program success (e.g., energy and demand savings, customers served, number of units installed).

Allegheny Power has sought to create a portfolio of energy efficiency and conservation, and demand response programs that enable most or all customers to participate in one or more programs. Programs were selected to target the major energy-consuming systems, which are HVAC, major consumer appliances and lighting, with a sufficiently broad scope to provide an opportunity for almost all Pennsylvania customers to participate. Programs were selected to target each customer class including Residential, Residential Low-Income, Small Commercial and Industrial, Large Commercial and Industrial, and Governmental/Non-Profit customers. The proposed programs incorporate services that are targeted directly to end-users and to key trade allies.

Allegheny Power conducted program design in coordination with input received from various stakeholders. Allegheny Power conducted 13 formal stakeholder or working group meetings throughout the program development process to solicit stakeholder input and feedback regarding the development of the Company's Act 129 Plan. The stakeholder process also included numerous informal meetings and discussions which provided the Company with valuable input on the proposed programs. In the course of arriving at these recommended programs, over 40 measures were considered or evaluated. The collaborative efforts provided through the stakeholder process have been incorporated in this Plan. The Company looks forward to continuing collaborative efforts to ensure the success of Plan implementation and providing energy efficiency and conservation and demand response programs to its customers. In addition, Allegheny Power met with Commission Staff to provide a preliminary review of its Plan for feedback.

Success factors for this plan include: attaining the planned participation and energy savings goals, the number of homes completed versus goal, energy savings achieved, increased market share, customer awareness and acceptance, high customer satisfaction and the benefit/cost ratio. To improve success, many of the proposed programs were modeled after ACEEE exemplary programs or other utility programs identified through benchmarking.

##### 3.1.2 Describe how programs were constructed for each portfolio to provide market coverage sufficient to reach overall energy and demand savings goals. Describe analyses and/or research that were performed (e.g., market, best-practices, market modeling).

Please see 3.1.3 for combined response.

### 3.1.3 Describe how energy efficiency, conservation, solar, solar photovoltaic systems, geothermal heating, and other measures are included in the portfolio of programs as applicable.

Allegheny Power proposes eleven energy efficiency and conservation, and demand response programs and rate offerings for residential and low income residential customers. Two of the programs are very similar and are only differentiated because they are only offered to low income participants. The proposed residential programs cover most of the major energy consuming devices in the home, thus increasing the opportunity for more residential customers to benefit from a program. The residential programs differ generally by the types of measures that are offered, the delivery mechanism that is used, and the residential sector being targeted. The following table provides a listing of the Residential and Residential Low Income programs and the general type of energy efficiency measure activity or demand reduction target activity anticipated in the program. In general, the program delivery mechanism differs between measures that are delivered at the premise level and mass market programs. Appliance programs are mass market programs whereas Home Performance programs are delivered at the premise level.

Residential Including Low Income									
Program Name	EEC	DR	Heating	Cooling	Water Heating	Building Envelope	Kitchen Appliances	Clothes Washing	Lighting
Residential Energy Star and High Efficiency Appliance Program	X		X	X			X	X	
Compact Fluorescent Lighting (CFL) Rewards Program	X								X
Residential HVAC Efficiency Program	X		X	X					
Residential Home Performance Program	X		X	X	X	X	X	X	X
Residential Low Income Home Performance Check-Up Audit & Appliance Replacement Program	X		X	X	X	X	X	X	X
Residential Low Income Joint Utility Usage Management Program	X		X	X	X	X	X	X	X
Residential Low Income Room Air Conditioner Replacement Program	X			X					
Residential Efficiency Rewards Rate	X		X	X	X		X	X	X
Programmable Controllable Thermostat (PCT) Program		X		X	X				
Pay Ahead Smart Service Rate	X		X	X	X		X	X	X
Critical Peak Rebate (CPR) Rate		X	X	X	X		X	X	X
Time of Use with Critical Peak Pricing Rate	X	X	X	X	X		X	X	X
Hourly Pricing Option (HPO) Rate	X	X	X	X	X		X	X	X

Allegheny Power proposes ten energy efficiency and conservation, and demand response programs and rate offerings for non-residential customers. The commercial, industrial, governmental and non-profit programs encompass the core energy consuming devices for the types of customers in these sectors, especially with the inclusion of the custom programs. Fundamentally, each of the programs includes the same types of measures; the biggest differences between measures arise in the size and type of commercial and industrial customer that is served by the program. The following tables provide a list of the programs that Allegheny Power proposes for Small Commercial and Industrial, Large Commercial and Industrial and Governmental/Non-Profit customers. The measures described herein are organized by six different end-uses and are differentiated by type (prescriptive or common). “Prescriptive measures” are measures that are commonly implemented in large scale and have well-established, predefined and consistent applications and savings estimates whereas “custom measures” are specific in relation to the customer and typically evaluated on a case-by-case basis. The Company also sought to include new technology and renewable energy projects in the Plan and has included these as custom measures.

Non-Residential										
Program Name	SC&I	LC&I	GNP	EEC	DR	HVAC	Lighting	Motors	Refrigeration	Process
Commercial HVAC Efficiency Program	X	X	X	X		X				
Commercial Lighting Efficiency Program	X	X		X			X			
Governmental/Non-Profit Lighting Efficiency Program			X	X			X			
Custom Technology Applications Program	X	X	X	X		X	X	X	X	X
Programmable Controllable Thermostat (PCT) Program	X		X		X	X				
Commercial and Industrial Drives Program	X	X	X	X				X		X
Custom Applications Program		X		X		X	X	X	X	X
Customer Load Response Program	X	X	X		X	X	X	X	X	X
Distributed Generation Program	X	X	X		X	X	X	X	X	X
Customer Resources Demand Response Program	X	X	X		X	X	X	X	X	X
Time of Use (TOU) with Critical Peak Pricing Rate	X		X	X	X	X	X	X	X	X
Hourly Pricing Option (HPO) Rate	X		X	X	X	X	X	X	X	X

To the extent possible, assumptions used to estimate load impacts (e.g., kWh and kW savings per unit, program net-to-gross ratios, measure lives) in the calculation of the TRC are taken from the Pennsylvania Technical Reference Manual (“TRM”). For measures where the required load impacts for cost-effectiveness test inputs were not available in the TRM, the Company utilized benchmarking studies or other resources to support its calculations.

Allegheny Power does not currently have any studies specific to expected participation rates for energy efficiency and conservation and demand response initiatives within its Pennsylvania service territory. For purposes of cost-effective evaluations, a conservative estimation approach to participation rates and energy savings was used to ensure a greater likelihood that the measure or program will remain cost effective throughout its lifecycle. In the case of residential measures, Allegheny Power looked to its 2006 Residential Appliance Saturation Survey to determine the potential pool of participants. With respect to commercial and industrial measures, the Company relied on information from sources such as the Energy Information Administration and the results of pilot studies conducted by other utilities across North America. Within the estimation regime, data was gathered as to incentive levels, program duration, and customer participation. Participation rates were selected somewhat qualitatively from looking at the potential pool of participants, their similarity to the participants of other utilities and the actual take up and participation rates achieved.

As mentioned above, Allegheny Power has undertaken benchmarking studies in an effort to ensure the reasonableness and viability of its program proposals. In doing so, numerous utilities (and sometimes their contractors) and end-users were contacted to ascertain the parameters of the programs offered and the relative success of those program offerings. Benchmarking was used to validate and refine assumptions, and the Company generally found that the benchmarking data gathered was convergent. In those instances where outlying data appeared, Allegheny looked further into the cause of those results to determine if the Company’s service territory might have similar characteristics and other correlating factors. Such observation permitted general validation of the assumptions regarding participation levels (both take up and steady state), participation costs and savings estimates from sources such as the EPA, DOE, Northeast Efficiency Partnership (“NEEP”), American Council

for an Energy-Efficient Economy (“ACEEE”) and the Consortium of Energy Efficiency (“CEE”). Finally, programs from Energy Star and ACEEE’s “America’s Best Exemplary Programs” were also reviewed.

The following companies and entities (in no particular order) were contacted to gather benchmarking information:

United Illuminating	City of Little Rock, AR
Austin Energy	Southwestern Pennsylvania Commission
Xcel Energy	City of Pittsburgh, PA
City of Philadelphia Municipal Energy Office	Institute of Transportation Engineers
Puget Sound Energy	American Council for an Energy Efficient Economy
Avista Utilities	California Energy Commission
Alliant Energy	Consortium for Energy Efficiency
Efficiency Vermont	Lighting Research Center
City of Fayetteville, AR	U.S. Department of Energy
Gainesville Reg. Utilities	
City of Greensburg, PA	

Allegheny Power also conducted research on existing state and federal building codes and standards for consideration in the measure assumptions. Rebates were only considered for appliances that exceed the federal minimum energy efficiency standard.<sup>12</sup> In cases where this minimum standard for the measure was already Energy Star qualified, incentives were designed only for higher efficiency models.

In other cases, such as for CFL, where CFLs are to become the federal standard in 2012 (incandescent lamps will no longer be manufactured or imported in the U.S.), the Company plans to revise the incentive program to promote specialty CFLs and/or new energy efficient lighting types. Therefore, Allegheny Power’s fundamental approach will not provide rebates for appliances that simply meet current standards. In fact, the Company supports a migration from rebates to increasing customer behaviors as the market transforms.

Allegheny Power reviewed ACEEE exemplary programs and other utility programs identified through internal benchmarking to determine its incentive strategy. The general approach to setting incentive levels for measures, other than those in the custom programs, was to provide an incentive for between 25% to 75% of the

<sup>12</sup> Residential appliances: [http://www.energysavers.gov/your\\_home/appliances/index.cfm/mytopic=10050](http://www.energysavers.gov/your_home/appliances/index.cfm/mytopic=10050)

incremental cost of the high-efficiency device, with 50% being the target, as compared to the standard efficiency device. The Company's Plan also includes a general reduction in customer incentives beginning in the 2011 Plan year. The Company proposes that as customer awareness and education regarding energy efficiency and conservation increases that smaller customer incentives will be necessary to encourage customers to participate in programs that promote energy efficiency and conservation. This concept also coincides with the Company's implementation of Smart Metering and related infrastructure that further supports customer awareness and education and changing customer behaviors. The Company proposes to revise the Plan during the annual review process, based on the experience gained from offering programs to our PA customers, in an effort to maximize Plan effectiveness in meeting the targets and requirements of Act 129. Required incentive levels will vary from program to program and as programs are reviewed, updated, added or removed the overall incentive strategy will need to be updated to reflect this experience.

### **3.2. Residential Sector (as defined by EDC Tariff) Programs**

#### **a. RESIDENTIAL ENERGY STAR AND HIGH EFFICIENCY APPLIANCE PROGRAM**

##### **Years during which program will be implemented**

January 2010 through May 2013

##### **Objective(s)**

The Energy Star and High Efficiency Appliance Program encourages customers in Allegheny Power's Pennsylvania service territory to purchase the most energy-efficient appliances available instead of less energy-efficiency appliances.

##### **Target market**

This program targets Allegheny Power's approximately 618,000 Pennsylvania residential customers.

##### **Program description**

The Energy Star and High Efficiency Appliance Program encourages customers in Allegheny Power's Pennsylvania service territory to purchase the most energy-efficient appliances available instead of less energy-efficiency appliances. To encourage participation and to overcome cost barriers, this program provides rebates (equal to about 50% of the appliance's incremental cost in most cases) for the purchase of appliances that meet or exceed Energy Star or other energy efficiency ratings.<sup>13</sup>

Mail-in and point-of-sale (where possible) rebates will be offered for clothes washers, clothes dryers, dishwashers, refrigerators (with turn-in), freezers (with turn-in), programmable thermostats, and room air conditioners.

##### **Implementation strategy (including expected changes that may occur in different program years)**

Allegheny Power will contract directly with rebate processing and appliance recycling services providers.

Allegheny Power will contract implementation administration activities including coordination of point of sale agreements, marketing activities, rebate processing and appliance recycling services provider contractor oversight, reporting, and program evaluation.

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<sup>13</sup> In instances where Energy Star does not provide an efficiency rating for a device, other standards, such as the federal minimum efficiency standards may be used to establish eligibility criteria.

Possible future enhancements for this program include adding consumer electronics, high efficiency water heaters and renewable technologies. Additionally, the Program will be modified as federal minimum energy efficiency standards increase to ensure the program continues to incent customers to purchase more energy efficient appliances.

### **Program issues and risks and risk management strategy**

Achieving estimated participation rates is a program risk. The program will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy;
- Modify rebates; and
- Modify or eliminate measures being offered.

Another risk is the possibility of an increase in the federal energy efficiency standards for appliances resulting in reduced energy savings of appliances based on the current appliance measure requirements. As these standards change, appliance requirements and/or energy savings will be modified to reflect the energy efficiency standards of appliances available at that time. The program manager will be responsible for monitoring these changes and updating each appliance measure as needed.

### **Anticipated costs to participating customers**

The customer will be required to pay for the full cost of the new appliance minus the offered appliance rebate. The offered appliance rebate amount is approximately 50% of the appliance's incremental cost.<sup>14</sup>

### **Ramp up strategy**

This program is expected to be 'full launched' that is, offered to the entire target population on the launch date. Allegheny Power will execute the launch in this manner since it will have had some experience in program management in another state prior to the Pennsylvania launch. It is assumed that the ramp up period for this program will occur in the 2009 and 2010 plan years. In the 2009 plan year, the participation rates are projected to be 33% of future year levels. In the 2010 plan year, the participation rates are projected to be 50% of future year levels.

### **Marketing strategy**

Marketing activities will target eligible customers to inform them of the program, its components, and the associated benefits primarily through bill inserts, direct mail, print and radio advertising, and in-bound call center contact. In addition, the Home Performance Program will inform customers of this program at all customer contact points.<sup>15</sup>

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<sup>14</sup> Incremental cost is the cost to purchase the required higher energy efficient unit instead of the federal energy efficient standard unit.

<sup>15</sup> The Home Performance Program is detailed in Section 3.2.d.

Marketing activities will include leveraging and promoting federal and state funding opportunities (stimulus dollars, tax incentives, grants, etc.) that may be associated with this program.<sup>16</sup>

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

To encourage participation and to overcome cost barriers, this program provides the following program rebates for each year of the program:

<b>Eligible Program Measures &amp; Incentives</b>		
<b>MEASURE</b>	<b>REBATE (\$)</b>	<b>REBATE LEVEL (% of Incremental \$)</b>
Room Air Conditioner Rebate	\$25	83%
Room Air Conditioner Recycling	\$25	N/A
Refrigerators Rebate	\$50	50%
Refrigerators Recycling	\$35	N/A
Freezers Rebate	\$25	58%
Freezers Recycling	\$35	N/A
Clothes Washers	\$75	25%
Clothes Dryers	\$25	50%
Dishwashers	\$25	50%
Programmable Thermostat	\$25	33%

**Program start date with key schedule milestones**

Allegheny Power will determine and measure key milestones achieved as referenced in program participation levels and savings tables for respective years.<sup>17</sup>

- Implementation: Award vendor contracts fourth quarter 2009
- Program Marketing: Begin fourth quarter 2009
- Program Start Date: January 1, 2010
- Program End Date: May 31, 2013<sup>18</sup>

**Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 1 EM&V category.<sup>19</sup>

All rebate applications will be reviewed upon receipt to verify adherence to eligibility requirements and applicant eligibility. A statistically valid sample of all rebate

<sup>16</sup> Reference Additional Funding Table in Section 10.F.2.

<sup>17</sup> Start date and milestones based on assumed Plan approval in fourth quarter 2009.

<sup>18</sup> All measures subject to modification or elimination if federal energy efficiency standard changes or other changes warrant.

<sup>19</sup> Reference Section 6.1.2. for details of Level 1 EM&V.



applications, based on 90% confidence level and a plus-or-minus 5% margin of error, will be selected for survey.

Information that will be collected for EM&V purposes will include the quantity of the measure installed, nameplate data from the existing model, the capacity (size) of the existing model, the nameplate data for the new model and the capacity (size) of the new model. A customer survey will also be completed.

The refrigerator and freezer recycling measures also include verification that an operating refrigerator or freezer was removed from a customer's premise, and that the refrigerator or freezer was appropriately recycled. The recycling vendor is also responsible for verifying the nameplate data of the removed equipment.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program. Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

#### **Administrative requirements – include utility staffing levels**

Allegheny Power will assign a program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. It is estimated that program management will require 0.25 FTE.

#### **Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	3,806,971	8,700	8,700
<b>2010</b>	3,829,813	32,899	32,899
<b>2011</b>	3,852,792	63,397	63,397
<b>2012</b>	3,875,908	63,777	63,777

#### **Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$321,729	\$570,000	\$279,193	\$61,519	\$298,611	<b>\$1,531,052</b>
<b>2010</b>	\$145,119	\$1,409,040	\$1,012,833	\$223,187	\$1,116,196	<b>\$3,906,375</b>
<b>2011</b>	\$148,410	\$1,451,310	\$2,034,384	\$192,349	\$2,006,704	<b>\$5,833,158</b>
<b>2012</b>	\$151,777	\$872,000	\$2,046,591	\$198,294	\$2,018,744	<b>\$5,287,406</b>
<b>TOTAL</b>	<b>\$767,035</b>	<b>\$4,302,350</b>	<b>\$5,373,001</b>	<b>\$675,349</b>	<b>\$5,440,256</b>	<b>\$16,557,991</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	3,062	3,062	1.0	1.0
<b>2010</b>	11,176	14,239	3.8	4.9
<b>2011</b>	22,315	36,553	7.5	12.4
<b>2012</b>	22,448	59,001	7.5	19.9

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 1.8  
Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

In an effort to enable all customer classes to gain added benefits, Allegheny Power will educate customers on the availability of incentives from other funding sources including, but not limited to, Federal Tax Credits for Energy Efficiency under the “Emergency Economic Stabilization Act of 2008” and Stimulus Funds under the “American Recovery and Reinvestment Act of 2009” as appropriate and as funding is available.<sup>20</sup>

<sup>20</sup> Reference Additional Funding Table in Section 10.F.2.

**b. COMPACT FLUORESCENT LIGHTING (CFL) REWARDS PROGRAM**

**Years during which program will be implemented**

January 2010 through May 2013

**Objective(s)**

The CFL Rewards Program encourages customers in Allegheny Power's Pennsylvania service territory to purchase compact fluorescent lights (CFLs) instead of incandescent lamps.

**Target market**

This program targets Allegheny Power's approximately 618,000 Pennsylvania residential customers.

**Program description**

The CFL Rebate Program encourages customers in Allegheny Power's Pennsylvania service territory to purchase CFLs instead of incandescent bulbs. To encourage participation and to overcome cost barriers, this program provides mail-in and point-of-sale rebates and markdowns (where possible) in parts of Allegheny Power's service territory with large retail stores. In parts of the service territory that border other EDCs and in Allegheny Power's more rural territory, only the mail-in rebates will be available to customers.

**Implementation strategy (including expected changes that may occur in different program years)**

Allegheny Power is evaluating partnership opportunities with companies such as Technical Consumer Products ("TCP") to work with retail stores such as Home Depot and others to further market this program in their stores.

Allegheny Power will contract implementation administration activities including coordination of point of sale agreements, marketing activities, rebate processing services provider contractor oversight, reporting, and program evaluation.

Allegheny Power will contract directly with rebate processing services provider.

As incandescent bulbs will become unavailable at the end of 2011, this program will be modified based on the available bulbs at that time.

**Program issues and risks and risk management strategy**

A risk with this program is the possibility of new lighting technologies not being as efficient or available at the time incandescent bulbs will become unavailable at the end of 2011. If and when this were to happen, claimed energy savings will need to be modified based on the available bulbs at that time. The program manager will be responsible for monitoring these changes and updating the measure as needed.

Achieving estimated participation rates is a program risk. The program will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy;
- Modify rebates; and
- Modify or eliminate programs.

**Anticipated costs to participating customers**

The customer will be required to pay for the full cost of the CFLs minus the offered CFL rebate or point of sale markdown. The offered CFL rebate amount is approximately 50% of the incremental cost of purchasing a CFL instead of an incandescent bulb.

**Ramp up strategy**

This program is expected to be ‘full launched’ that is, offered to the entire target population on the launch date. AP will execute the launch in this manner since it will have had some experience in program management in another state prior to the Pennsylvania launch. It is assumed that the ramp up period for this program will occur in the 2009 and 2010 plan years. In the 2009 plan year, the participation rates are projected to be 33% of future year levels. In the 2010 plan year, the participation rates are projected to be 50% of future year levels.

**Marketing strategy**

Marketing activities will target eligible customers to inform them of the program, its components, and the associated benefits primarily through bill inserts, direct mail, print and radio advertising, and in-bound call center contact. In addition, the Home Performance Program will inform customers of this program at all customer contact points.<sup>21</sup>

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

To encourage participation and to overcome cost barriers, this program provides the following program rebates for each year of the program:

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<sup>21</sup> The Home Performance Program is detailed in Section 3.2.d.

<b>Eligible Program Measures &amp; Incentives</b>		
<b>MEASURE</b>	<b>REBATE (\$)</b>	<b>REBATE LEVEL (% of Incremental \$)</b>
CFL Rewards Program		
Single Pack	\$1.50	38%
Multi-Pack	\$3.00	30%

### **Program start date with key schedule milestones**

Allegheny Power will determine and measure key milestones achieved as referenced in program participation levels and savings tables for respective years.<sup>22</sup>

- Implementation: Award vendor contracts fourth quarter 2009
- Program Marketing: Begin fourth quarter 2009
- Program Start Date: January 1, 2010
- Program End Date: May 31, 2013<sup>23</sup>

### **Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 1 EM&V category.<sup>24</sup>

All rebate applications will be reviewed upon receipt to verify adherence to eligibility requirements and applicant eligibility. A statistically valid sample of all rebate applications, based on 90% confidence level and a plus-or-minus 5% margin of error, will be selected for survey.

Information that will be collected for EM&V purposes will include the quantity of the measure installed and the wattage of the new CFL. A customer survey will also be completed.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program. Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

### **Administrative requirements – include utility staffing levels**

Allegheny Power will assign a program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. It is estimated that program management will require 0.25 FTE.

<sup>22</sup> Start date and milestones based on assumed Plan approval in fourth quarter 2009.

<sup>23</sup> All measures subject to modification or elimination if federal standard changes or other changes warrant.

<sup>24</sup> Reference Section 6.1.2. for details of Level 1 EM&V.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	16,469,117	34,100	161,975
<b>2010</b>	16,307,141	121,553	577,377
<b>2011</b>	15,729,765	234,498	1,113,868
<b>2012</b>	14,615,897	217,893	1,034,992

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$321,729	\$63,000	\$20,946	\$16,260	\$89,513	<b>\$511,448</b>
<b>2010</b>	\$145,119	\$155,736	\$74,664	\$70,053	\$319,077	<b>\$764,648</b>
<b>2011</b>	\$148,410	\$160,408	\$144,041	\$59,656	\$567,699	<b>\$1,080,214</b>
<b>2012</b>	\$151,777	\$96,379	\$133,841	\$38,802	\$527,498	<b>\$948,297</b>
<b>TOTAL</b>	<b>\$767,035</b>	<b>\$475,523</b>	<b>\$373,491</b>	<b>\$184,771</b>	<b>\$1,503,787</b>	<b>\$3,304,607</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	7,002	7,002	0.0	0.0
<b>2010</b>	24,960	31,963	0.1	0.1
<b>2011</b>	48,153	80,116	0.1	0.2
<b>2012</b>	44,743	124,859	0.1	0.3

**Cost-effectiveness – include TRC for each program year and cumulative**

The TRC for this program is calculated to be 8.7

Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

This program will be revised from offering rebates for standard CFLs to offering rebates for LED lighting and/or specialty CFLs as these technologies become available and/or the standard CFLs saturate the market. The recent Energy Independence and Security Act (EISA) of 2007 legislation requires that the efficiency standards of incandescent bulbs (in the form of minimum lumen per watt values) be phased in by 2014. The savings per bulb decreases beginning in 2012 in conjunction with this legislation.

**c. RESIDENTIAL HVAC EFFICIENCY PROGRAM**

**Years during which program will be implemented**

January 2010 through May 2013.

**Objective(s)**

The Residential HVAC Efficiency Program encourages residential customers in Allegheny Power's Pennsylvania service territory to purchase energy efficient central air conditioners and heat pumps instead of available less energy efficient units.

**Target market**

This program targets all residential customers in Allegheny Power's Pennsylvania service area who have interest in electric HVAC systems. There are approximately 618,000 residential customers in Allegheny Power's Pennsylvania service territory, of which about half cool their homes with air conditioning.

**Program description**

The Residential HVAC Efficiency Program encourages residential customers to purchase a high efficiency central air conditioner (CAC) or heat pump (HP) (SEER ratings of 14.5 or greater). To encourage participation and to overcome cost barriers, this program provides rebates (equal to about 50% of the appliance's incremental cost in most cases) for the purchase of units that exceed the federal energy efficient standard (SEER ratings of 13). To qualify for these rebates under this program, the work must be completed by a certified contractor and a programmable thermostat must be installed.

**Implementation strategy (including expected changes that may occur in different program years)**

Allegheny Power will contract implementation administration activities including coordination with HVAC equipment distributors and installation contractors, marketing activities, rebate processing services provider contractor oversight, reporting, and program evaluation.

Allegheny Power will contract directly with rebate processing service providers.

Future enhancements may include renewable heating and cooling technologies.

**Program issues and risks and risk management strategy**

Achieving estimated participation rates is a program risk. The program will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy;
- Modify rebates; and



- Modify or eliminate measures being offered.

Another risk is the possibility of an increase in the federal energy efficiency standards for HVAC equipment resulting in reduced energy savings based on the current HVAC measure requirements. If and when these standards change, HVAC requirements and/or energy savings will be modified to reflect the energy efficiency standards of HVAC equipment available at that time. The program manager will be responsible for monitoring these changes and updating each appliance measure as needed.

### **Anticipated costs to participating customers**

The customer will be required to pay for the full cost of the new central air conditioner or heat pump minus the offered appliance rebate. The offered rebate amount is approximately 50% of the unit's incremental cost.<sup>25</sup> Approximate (net) equipment costs are:

- Residential Air Conditioner: \$1,190
- Residential Heat Pump: \$1,673

### **Ramp up strategy**

This program is expected to be 'full launched' that is, offered to the entire target population on the launch date. Allegheny Power will execute the launch in this manner since it will have had some experience in program management in another state prior to the Pennsylvania launch. It is assumed that the ramp up period for this program will occur in the 2009 and 2010 plan years. In the 2009 plan year, the participation rates are projected to be 33% of future year levels. In the 2010 plan year, the participation rates are projected to be 50% of future year levels.

### **Marketing strategy**

Marketing activities will target eligible customers to inform them of the program, its components, and the associated benefits primarily through bill inserts, direct mail, print and radio advertising, and in-bound call center contact. In addition, the Home Performance Program will inform customers of this program at all customer contact points and HVAC equipment distributors and installation contractors will be notified of the program's requirements and available customer incentives.<sup>26</sup>

Marketing activities will include leveraging and promoting federal and state funding opportunities (stimulus dollars, tax incentives, grants, etc.) that may be associated with this program.<sup>27</sup>

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<sup>25</sup> Incremental cost is the cost to purchase the required higher energy efficient unit instead of the federal energy efficient standard unit.

<sup>26</sup> The Home Performance Program is detailed in Section 3.2.d.

<sup>27</sup> Reference Additional Funding Table in Section 10.F.2.

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

<b>Eligible Program Measures &amp; Incentives</b>		
<b>MEASURE</b>	<b>REBATE (\$)</b>	<b>REBATE LEVEL (% of Incremental \$)</b>
High Efficiency Air Conditioner		
SEER 14.5	\$100	42%
SEER 15	\$150	60%
SEER 16 & Above	\$200	65%
High Efficiency Heat Pump		
SEER 14.5	\$100	26%
SEER 15	\$150	29%
SEER 16 & Above	\$200	24%

### **Program start date with key schedule milestones**

Allegheny Power will determine and measure key milestones achieved as referenced in program participation levels and savings tables for respective years.<sup>28</sup>

- Implementation: Award vendor contracts fourth quarter 2009
- Program Marketing: Begin fourth quarter 2009
- Program Start Date: January 1, 2010
- Program End Date: May 31, 2013<sup>29</sup>

### **Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 1 EM&V category.<sup>30</sup>

All rebate applications will be reviewed upon receipt to verify adherence to eligibility requirements and applicant eligibility. A statistically valid sample of all rebate applications, based on 90% confidence level and a plus-or-minus 5% margin of error, will be selected for survey.

Information that will be collected for EM&V purposes may include a description of the application, the quantity of the measure installed, nameplate data from the existing model, the capacity (size) of the existing model, the nameplate data for the new model and the capacity (size) of the new model. A customer survey will also be completed.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

<sup>28</sup> Start date and milestones based on assumed Plan approval in fourth quarter 2009.

<sup>29</sup> All measures subject to modification or elimination if federal standard changes or other changes warrant.

<sup>30</sup> Reference Section 6.1.2. for details of Level 1 EM&V.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

**Administrative requirements – include utility staffing levels**

Allegheny Power will assign a program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. It is estimated that program management will require 0.25 FTE.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	339,251	406	406
<b>2010</b>	341,287	2,453	2,453
<b>2011</b>	343,335	4,935	4,935
<b>2012</b>	345,395	4,964	4,964

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$289,222	\$92,500	\$499	\$25,641	\$60,948	<b>\$468,809</b>
<b>2010</b>	\$145,119	\$228,660	\$3,013	\$111,148	\$367,881	<b>\$855,821</b>
<b>2011</b>	\$148,410	\$235,520	\$6,062	\$100,224	\$682,627	<b>\$1,172,844</b>
<b>2012</b>	\$151,777	\$141,509	\$6,098	\$87,090	\$686,723	<b>\$1,073,198</b>
<b>TOTAL</b>	<b>\$734,528</b>	<b>\$698,189</b>	<b>\$15,673</b>	<b>\$324,103</b>	<b>\$1,798,179</b>	<b>\$3,570,672</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	163	163	0.2	0.2
<b>2010</b>	982	1,145	1.1	1.2
<b>2011</b>	1,976	3,120	2.1	3.4
<b>2012</b>	1,987	5,107	2.1	5.5

**Cost-effectiveness – include TRC for each program**

The TRC for this program is calculated to be 1.0

Refer to Table 7A for TRC for each program year

**Other information deemed appropriate**

In an effort to enable all customer classes to gain added benefits, Allegheny Power will educate customers on the availability of incentives from other funding sources including, but not limited, to Federal Tax Credits for Energy Efficiency under the “Emergency Economic Stabilization Act of 2008” and/or Stimulus Funds under the “American Recovery and Reinvestment Act of 2009” as appropriate and as funding is available.<sup>31</sup>

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<sup>31</sup> Reference Additional Funding Table in Section 10.F.2.

**d. RESIDENTIAL HOME PERFORMANCE PROGRAM****Years during which program will be implemented**

January 2010 through May 2013

**Objective(s)**

The Residential Home Performance Program encourages residential customers in Allegheny Power's Pennsylvania service territory to improve the overall efficiency of their homes and reduce their carbon footprint through a holistic approach to energy consuming systems in the home including customer EE&C education, the installation of audit measures and informing customers of Allegheny Power's other EE&C residential programs.

**Target market**

The program will target the approximately 618,000 residential customers in Allegheny Power's Pennsylvania service territory.

**Program description**

The Residential Home Performance Program provides a holistic approach to educating customers on energy efficiency and conservation, and to improve overall home performance, by providing customers with a choice of three energy audit measures including an On-line Audit, a Check-Up Audit and a Comprehensive Audit. Allegheny Power is offering a \$50 incentive for the Check-Up Audit and Comprehensive Audit. The customer will be eligible to receive an additional incentive for the installation of measures recommended by the audit up to the balance of the audit cost.

Allegheny Power will contract with BPI certified contractors<sup>32</sup> or consultants to provide the audits conducted at the home and install standard measures at the time of the audit. At the completion of the audit, the customer will be presented with home energy efficiency and conservation recommendations and information for Allegheny Power's other residential program offerings.

The measures directly available through this program for electric heat customers are attic insulation and home sealing via the comprehensive audit and attic insulation via the Check-Up audit. Home sealing is not offered to the Check-Up Audit customer due to the concern of reducing air exchanges in the home to a level which may produce poor air quality from, for example, carbon monoxide, moisture and mold. Allegheny Power will only offer incentives for home sealing as a recommendation from a blower-door test,

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<sup>32</sup> The Building Performance Institute offers nationally-recognized training, certification, accreditation, and quality-assurance programs. This includes standard construction and modular housing.

<http://www.bpi.org/content/contractors/faq.html>

available as part of a Comprehensive Audit. This program leverages Allegheny Power's portfolio of programs for a more energy efficient home.

The measures directly supported by this program and available to all audit participants are:

- Residential Energy Star and High Efficiency Appliance Program;
- Residential CFL Rewards Program;
- Residential HVAC Efficiency Program

### **Implementation strategy (including expected changes that may occur in different program years)**

Allegheny Power will contract implementation management and administration activities including sub-contracting for home audit services, marketing activities, reporting, and program evaluation.

### **Program issues and risks and risk management strategy**

There is currently a significant deficiency in certified auditors. An RFP is planned to contract a minimum of 40 more auditors. Allegheny Power is also discussing opportunities to partner with PA Home Energy<sup>33</sup> to provide the audits conducted in the home.

Achieving estimated participation rates is a program risk. The program will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy;
- Modify incentives; and
- Modify or eliminate measures being offered.

### **Anticipated costs to participating customers**

- |   |       |
|---|-------|
| • Comprehensive Audit   | \$442 |
| • Check-Up Audit  | \$239 |
| • On-Line   | \$0   |
| • Comprehensive and Check-Up Direct Measures - Installation and/or material costs less the customer's audit fee above <sup>34</sup> |       |

### **Ramp up strategy**

This program is expected to be at 'full launch' that is, offered to the entire target population on the launch date. Allegheny Power will execute the launch in this manner

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<sup>33</sup> PA Home Energy with Keystone HELP promotes a holistic approach to educating customers on energy efficiency and conservation to improve overall home performance. This is a potential partnership to leverage their existing process, BPI certified auditors, state presence, and program infrastructure to reduce start-up time and cost along with providing a quality program to the customer. See PA Home Energy <http://www.pahomeenergy.com/>

<sup>34</sup> Keystone HELP offers a \$325.00 rebate when replacement or new installation is funded through the Keystone HELP Loan Program.

since it will have had some experience in program management in Maryland prior to the Pennsylvania launch. It is assumed that the ramp up period for this program will occur in the 2009 and 2010 plan years. In the 2009 plan year, the participation rates are projected to be 33% of future year levels. In the 2010 plan year, the participation rates are projected to be 50% of future year levels.

### Marketing strategy

Marketing activities will target eligible customers to inform them of the program, its components, and the associated benefits primarily through bill inserts, direct mail, print and radio advertising, and in-bound call center contact.

### Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)

To encourage participation and to overcome cost barriers, Allegheny Power is offering a \$50.00 incentive for the Check-Up Audit and Comprehensive Audit. The customer will be eligible to receive an additional incentive for the installation of measures recommended by the audit up to the balance of the audit cost. The table below reflects the combination of both incentives on average.

Eligible Program Measures & Incentives		
MEASURE	REBATE (\$)	REBATE LEVEL (%)
On-Line Audit	4 CFLs	100%
Check-Up Audit	\$50 + 15% up to audit cost	
Comprehensive Audit	\$50 + 15% up to audit cost	
Consumer Efficiency	CFLs & Educational Material	

### Program start date with key schedule milestones

Allegheny Power will determine and measure key milestones achieved as referenced in program participation levels and savings tables for respective years.

- Implementation: Establish partnership with PA Home Energy and execute vendor contracts
- Program Marketing: Early 4<sup>th</sup> quarter 2009 so customers can plan for their 2010 home projects
- Program Start Date: January 2010
- Program End Date: May 31, 2013<sup>35</sup>

### Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant

This program falls into the Level 1 EM&V category.<sup>36</sup> Allegheny will evaluate software tools referenced in the PA TRM and discuss options with the successful EM&V vendor.

<sup>35</sup> All projects accepted must be completed by May 31, 2013. This assumes Plan will end May 31, 2013.

<sup>36</sup> Reference Section 6.1.2. for details of Level 1 EM&V.

A statistically valid sample of all participants, based on a 90% confidence level and a plus-or-minus 5% margin of error, will be selected for a follow-up phone call to verify that they received their energy efficiency kit and, including but not limited to, the number of and location of CFLs installed.

Allegheny Power will audit 20% of each certified contractor's projects in the first year and 5% per year thereafter for quality assurance. The Company expects that contractor training programs would be modified to address any trends discovered through the audit process.

A statistically valid sample, based on a 90% confidence level and a plus-or-minus 5% margin of error, will be selected annually for post-installation inspection. Inspections will include a site visit to verify energy-efficient technical specifications and quantities

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

#### **Administrative requirements – include utility staffing levels**

Allegheny Power will assign a program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. It is estimated that program management will require 0.5 FTE.

#### **Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	1,788,780	4,952	4,952
<b>2010</b>	1,794,099	66,956	66,956
<b>2011</b>	1,793,477	94,540	94,540
<b>2012</b>	1,785,333	94,756	94,756



**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$304,776	\$500,000	\$366,878	\$38,775	\$232,810	<b>\$1,443,239</b>
<b>2010</b>	\$245,552	\$798,600	\$1,108,312	\$179,993	\$1,499,620	<b>\$3,832,077</b>
<b>2011</b>	\$290,220	\$832,308	\$913,540	\$165,685	\$2,413,993	<b>\$4,615,745</b>
<b>2012</b>	\$293,911	\$826,491	\$921,171	\$150,669	\$2,395,583	<b>\$4,587,824</b>
<b>TOTAL</b>	<b>\$1,134,459</b>	<b>\$2,957,399</b>	<b>\$3,309,901</b>	<b>\$535,122</b>	<b>\$6,542,005</b>	<b>\$14,478,886</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	1,872	1,872	0.2	0.2
<b>2010</b>	23,370	25,243	2.5	2.7
<b>2011</b>	32,704	43,883	3.5	4.8
<b>2012</b>	29,950	59,685	3.1	6.4

**Cost-effectiveness – include TRC for each program**

Home Performance Program TRC result is 1.6

Refer to Table 7A for TRC for each program year

**Other information deemed appropriate**

In an effort to enable all customer classes to gain added benefits, Allegheny Power plans to access and educate customers on the availability of incentives from available funding sources including, but not limited, to Federal Tax Credits for Energy Efficiency under the “Emergency Economic Stabilization Act of 2008” and/or Stimulus Funds under the “American Recovery and Reinvestment Act of 2009” as appropriate, and as funding becomes available.<sup>37</sup>

<sup>37</sup> Reference Additional Funding Table in Section 10.F.2.

**e. RESIDENTIAL EFFICIENCY REWARDS RATE****Years during which program will be implemented**

January 2011 through May 2013

**Objective(s)**

This rate offering encourages residential customers in Allegheny Power's Pennsylvania service territory to lower their electricity consumption.

**Target market**

The rate offering will target the approximately 618,000 residential customers in Allegheny Power's Pennsylvania service territory. Customers will be offered this rate offering in conjunction with the installation of smart metering and the related infrastructure, with a projected start date in first quarter 2011.

**Program description**

This rate offering encourages the reduction in energy consumption by providing bill credits to customers based on the amount of reduction in their electricity consumption from historical consumption levels. Coupled with the smart metering infrastructure,<sup>38</sup> customers will have access to energy consumption and price information enabling them to control their monthly energy consumption and electric bills. Studies show that customers become more efficient by virtue of receiving direct feedback regarding their energy usage.

This rate offering will be offered to customers on a voluntary basis. If the customer achieves the energy savings goal they will receive a bill credit based on the amount of their reduction.

**Implementation strategy (including expected changes that may occur in different program years)**

This rate offering requires the installation of a smart meter to collect the customer's hourly energy consumption. The addition of an in-home/in-facility display improves customer communications regarding their energy consumption and billing, providing the customer with direct feedback necessary for the customer to become more efficient. This rate offering leverages the smart metering infrastructure in providing customers with timely information to enable them to make wise energy choices.

**Program issues and risks and risk management strategy**

This rate offering is most effective when coupled with Smart Metering Infrastructure that provides customers with real-time price signals and information about current and past

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<sup>38</sup> For additional detail and graphical depiction of SMIP, refer to Section 10.F.9.

energy consumption. The rate offering is at risk if the Company does not receive timely approval of its SMIP filed on August 14, 2009.

Achieving estimated participation rates is a program risk. The rate offering will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy;
- Modify incentives, subject to PUC approval; and
- Modify or eliminate program, subject to PUC approval.

### **Anticipated costs to participating customers**

There are no customer costs to participate.

### **Ramp up strategy**

The implementation timeline for this rate offering will align with the smart metering infrastructure plan. See **Program start date with key schedule milestones** below for rollout.

### **Marketing strategy**

Marketing activities will target eligible customers to inform them of the rate offering, its components, and the associated benefits primarily through bill inserts, direct mail, print and radio advertising, and in-bound call center contact.

### **Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

The incentive to the customer will be by virtue of a bill credit, based on the customer's actual reduction in energy use.

<b>Eligible Program Measures &amp; Incentives</b>		
<b>MEASURE</b>	<b>REBATE (\$)</b>	<b>REBATE LEVEL (%)</b>
Residential Efficiency Rewards	Based on Usage Reduction	

### **Program start date with key schedule milestones**

#### **2009**

August – December                      Program development

#### **2010**

January – December                      Smart meter installations as per SMIP filed on August 14, 2009

Rate tariff development and filing

Marketing plan development

**2011**

February	Smart Meter System Operable  Smart meter installations as per SMIP filed on August 14, 2009  Marketing plan deployed
March – April	Deploy thermostats
June – September	Thermostats and DLC Operable
October – December	Program review and adjustments

**2011**

Smart meter installations as per SMIP filed on August 14, 2009

**2012**

Smart meter installations as per SMIP filed on August 14, 2009

**Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 2 EM&V category.<sup>39</sup>

It is expected that the smart metering infrastructure will provide the method for EM&V of this rate.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will file with the Commission for approval of program modifications if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

**Administrative requirements – include utility staffing levels**

Allegheny Power will assign a program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. It is estimated that program management of all demand response rate offerings will require 1.0 FTE.

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<sup>39</sup> Reference Section 6.1.2. for details of Level 2 EM&V.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year<sup>40</sup>**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	0	0	0
<b>2010</b>	35,438	276	276
<b>2011</b>	120,488	4,217	4,217
<b>2012</b>	205,538	14,388	14,388

**Estimated program budget (total) by year – include table with budget per year<sup>41</sup>**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
<b>2010</b>	\$72,676	\$0	\$0	\$9,625	\$0	<b>\$82,301</b>
<b>2011</b>	\$74,324	\$0	\$0	\$10,500	\$0	<b>\$84,824</b>
<b>2012</b>	\$76,010	\$0	\$0	\$10,111	\$0	<b>\$86,121</b>
<b>TOTAL</b>	<b>\$223,010</b>	<b>\$0</b>	<b>\$0</b>	<b>\$30,236</b>	<b>\$0</b>	<b>\$253,246</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project<sup>42</sup>**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	0	0	0.0	0.0
<b>2010</b>	161	161	0.0	0.0
<b>2011</b>	2,462	2,462	0.3	0.3
<b>2012</b>	8,400	8,400	1.0	1.0

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 2.1

Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

<sup>40</sup> Table reflects the combination of Residential Efficiency Rewards and Pay Ahead Smart Service Programs.

<sup>41</sup> Ibid

<sup>42</sup> Ibid

**f. PROGRAMMABLE CONTROLLABLE THERMOSTAT (PCT) PROGRAM****Years during which program will be implemented**

January 2011 through May 2013

**Objective(s)**

This program encourages demand reduction in the residential, small commercial and industrial and government/non-profit customer segment using programmable controlled thermostat (PCT) technology to control central air conditioners.

**Target market**

This program targets all residential customers in Allegheny Power's Pennsylvania service territory whose residence has a central air conditioning system and/or a heat pump. According to the Residential Appliance Saturation Survey that was completed by KEMA<sup>43</sup> for Allegheny Power in 2006, the current saturation is 53% for central air conditioning systems, and 2% for electric air-source heat pumps. This program will be offered to customers upon installation of smart metering and the related infrastructure necessary to effectuate control of the air conditioner during periods of peak system load.

**Program description**

A Programmable Controllable Thermostat coupled with smart metering infrastructure will provide energy consumption and price information to the customer to enable them to control their monthly energy consumption and electric bills. An automated demand response will be accomplished by directly controlling the air conditioning system via the thermostat in the residential home.<sup>44</sup> Participating customers will receive a professionally installed Programmable Controllable Thermostat that will have the following capabilities:

- **Pricing Signals**  
Customer will receive price signals and/or notices of peak-period events from Allegheny Power.
- **Programmable Set-Points to Reduce Energy Consumption**  
By using pre-programmed set-points, the customer can conserve energy. According to the U.S. Department of Energy, an Energy Star programmable thermostat compared to a non-programmable thermostat can reduce energy usage by as much as 16%.

**Implementation strategy (including expected changes that may occur in different program years)**

This program requires the installation of a smart meter to collect the customer's hourly energy consumption. The addition of an in-home/in-facility display improves customer communications regarding their energy consumption and billing. This program leverages

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<sup>43</sup> KEMA provides energy consulting in the fields of risk, performance and quality management. [www.kema.com](http://www.kema.com)

<sup>44</sup> For additional detail and graphical depiction of SMIP, refer to Section 10.F.9.

the smart metering and related infrastructure to allow the Company to control customer air conditioner loads during periods of peak system loading.

### **Program issues and risks and risk management strategy**

This program is most effective when coupled with Smart Metering Infrastructure that provides customers with real-time price signals and information about current and past energy consumption. The program is at risk if the Company does not receive timely approval of the SMIP filed on August 14, 2009.

Achieving estimated participation rates is a program risk. The program will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy;
- Modify incentives; and
- Modify or eliminate program.

### **Anticipated costs to participating customers**

There are no customer costs to participate.

### **Ramp up strategy**

The implementation timeline for this program will align with the smart metering infrastructure plan. See **Program start date with key schedule milestones** below for rollout.

### **Marketing strategy**

Marketing activities will target eligible customers to inform them of the program, its components, and the associated benefits primarily through bill inserts, direct mail, print and radio advertising, and in-bound call center contact.

### **Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

The incentive included in the table below is an annual credit that the customer will receive for participating in this program. The customer can obtain additional savings through their energy conservation initiatives that are supported and enabled by smart metering infrastructure.

<b>Eligible Program Measures &amp; Incentives</b>		
<b>MEASURE</b>	<b>REBATE (\$)</b>	<b>REBATE LEVEL (%)</b>
Programmable Controllable Thermostat Demand Response Program	\$50 per year	

**Program start date with key schedule milestones****2009**

August – December	Program development
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**2010**

January – December	Smart meter installations as per SMIP filed on August 14, 2009
	Rate tariff development and filing
	Marketing plan development

**2011**

February	Smart Meter System Operable
	Smart meter installations as per SMIP filed on August 14, 2009
	Marketing plan deployed
March – April	Deploy thermostats
June – September	Thermostats and DLC Operable
October – December	Program review and adjustments

**2011**

Smart meter installations as per SMIP filed on August 14, 2009

**2012**

Smart meter installations as per SMIP filed on August 14, 2009

**Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 2 EM&V category.<sup>45</sup>

It is expected that the smart metering infrastructure will provide the method for EM&V of this rate.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

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<sup>45</sup> Reference Section 6.1.2. for details of Level 2 EM&V.



**Administrative requirements – include utility staffing levels**

Allegheny Power will assign a program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. It is estimated that program management will require 0.25 FTE.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	0	0	0
<b>2010</b>	50,625	281	281
<b>2011</b>	172,125	4,303	4,303
<b>2012</b>	293,625	14,681	14,681

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
<b>2010</b>	\$145,119	\$18,540	\$0	\$108,034	\$14,063	<b>\$285,755</b>
<b>2011</b>	\$148,410	\$19,096	\$0	\$106,022	\$202,396	<b>\$475,925</b>
<b>2012</b>	\$151,777	\$11,474	\$0	\$103,124	\$690,529	<b>\$956,904</b>
<b>TOTAL</b>	<b>\$445,306</b>	<b>\$49,110</b>	<b>\$0</b>	<b>\$317,180</b>	<b>\$906,988</b>	<b>\$1,718,584</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	0	0	0.0	0.0
<b>2010</b>	36	36	0.2	0.2
<b>2011</b>	558	558	2.8	2.8
<b>2012</b>	1,903	1,903	9.5	9.5

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 0.7  
Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

g. **PAY AHEAD (SMART) SERVICE RATE**

**Years during which program will be implemented**

January 2011 through May 2013

**Objective(s)**

This rate offering will encourage greater awareness of energy consumption and energy costs as well as enable residential, small commercial and industrial and governmental/non-profit customers to better manage their electricity costs in the context of their overall monthly expenses by paying ahead for electric service and receiving information relative to their account balance and usage.

**Target market**

This rate offering will be targeted on a voluntary basis for residential customers with a smart meter. It is felt that participants will primarily be those customers with a desire to control their usage. Pay Ahead Smart Service may also deem to be good applications for high energy consumption customers and for landlord accounts.

**Program description**

Participants will receive a monthly report mailed with their bill depicting their electricity consumption for the month. Each of the participants will also be offered a thermostat/in-home display device that can provide customer messages including energy usage information and pricing.

**Implementation strategy (including expected changes that may occur in different program years)**

This rate offering requires the installation of a smart meter to collect the customer's hourly energy consumption. The addition of an in-home/in-facility display improves customer communications regarding their energy consumption and billing. This rate offering leverages the installation of smart metering and related infrastructure to provide customers with timely information to allow them to control their electricity usage and monthly electric bill.

**Program issues and risks and risk management strategy**

This rate offering is most effective when coupled with Smart Metering Infrastructure that provides customers with real-time price signals and information about current and past energy consumption. The rate offering is at risk if the Company does not receive timely approval of the SMIP filed on August 14, 2009.

Achieving estimated participation rates is a program risk. The rate offering will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy; and

- Modify or eliminate program.

### Anticipated costs to participating customers

There are no customer costs to participate.

### Ramp up strategy

The implementation timeline for this rate offering will align with the smart metering infrastructure plan. See **Program start date with key schedule milestones** below for rollout.

### Marketing strategy

Marketing activities will target eligible customers to inform them of the rate offering, its components, and the associated benefits primarily through bill inserts, direct mail, print and radio advertising, and in-bound call center contact.

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

Eligible Program Measures & Incentives		
MEASURE	REBATE (\$)	REBATE LEVEL (%)
Pay Ahead Smart Service	N/A	N/A

### Program start date with key schedule milestones

#### 2009

August – December                      Program development

#### 2010

January – December                      Smart meter installations as per SMIP filed on August 14, 2009

Smart Meter System deployment

Rate tariff development and filing

Marketing plan development

#### 2011

February                                      Smart Meter System Operable

Smart meter installations as per SMIP filed on August 14, 2009

Marketing plan deployed

March – April                                Deploy thermostats

June – September                      Thermostats and DLC Operable

October – December                  Program review and adjustments

### **2011**

Smart meter installations as per SMIP filed on August 14, 2009

### **2012**

Smart meter installations as per SMIP filed on August 14, 2009

### **Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 2 EM&V category.<sup>46</sup>

It is expected that the smart metering infrastructure will provide the method for EM&V of this rate.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

### **Administrative requirements – include utility staffing levels**

Allegheny Power will assign a program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. It is estimated that program management of all demand response rate offerings will require 1.0 FTE.

### **Estimated participation – includes tables indicating metric(s) with target value(s) per year<sup>47</sup>**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	0	0	0
<b>2010</b>	15,188	118	118
<b>2011</b>	51,638	1,807	1,807
<b>2012</b>	88,088	6,166	6,166

<sup>46</sup> Reference Section 6.1.2. for details of Level 2 EM&V.

<sup>47</sup> Table reflects the combination of Residential Efficiency Rewards and Pay Ahead Smart Service Programs.

**Estimated program budget (total) by year – include table with budget per year<sup>48</sup>**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
<b>2010</b>	\$31,147	\$0	\$0	\$4,125	\$0	<b>\$35,272</b>
<b>2011</b>	\$31,853	\$0	\$0	\$4,500	\$0	<b>\$36,353</b>
<b>2012</b>	\$32,576	\$0	\$0	\$4,333	\$0	<b>\$36,909</b>
<b>TOTAL</b>	<b>\$95,576</b>	<b>\$0</b>	<b>\$0</b>	<b>\$12,958</b>	<b>\$0</b>	<b>\$108,534</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project<sup>49</sup>**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	0	0	0.0	0.0
<b>2010</b>	69	69	0.0	0.0
<b>2011</b>	1,055	1,055	0.1	0.1
<b>2012</b>	3,600	3,600	0.4	0.4

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 2.1  
Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

<sup>48</sup> Table reflects the combination of Residential Efficiency Rewards and Pay Ahead Smart Service Programs.

<sup>49</sup> Ibid

**h. CRITICAL PEAK REBATE (CPR) RATE****Years during which program will be implemented**

January 2011 through May 2013

**Objective(s)**

This rate offering encourages residential, small commercial and industrial and governmental/non-profit customers in Allegheny Power's Pennsylvania service territory to lower their demand during periods of high system loading.

**Target market**

This rate offering will target residential customers in Allegheny Power's Pennsylvania service territory, in conjunction with the installation of smart metering and related infrastructure.

**Program description**

This demand response program encourages customers to lower their demand during peak load hours by offering a rate discount/rebate based on actual demand reduction. The reduction can occur during predefined or notified peak hours. CPR could be competitively neutral to allow customers to continue to pay the same generation charge as on utility-provided default service or from an electric generation supplier. CPR relies on the installation of a smart meter<sup>50</sup> to measure the customer's demand during peak hours. The addition of an in-home/in-facility display improves customer notification and communication of peak periods. Participants will receive additional information to assist them in controlling their demand and their electric bills.

**Implementation strategy (including expected changes that may occur in different program years)**

This rate offering requires the installation of a smart meter to measure the customer's hourly demand. The addition of an in-home/in-facility display improves customer communications regarding their demand and billing. This rate offering leverages the smart metering and related infrastructure to provide customers with timely information regarding their electric demand.

**Program issues and risks and risk management strategy**

This rate offering is most effective when coupled with Smart Metering Infrastructure that provides customers with real-time price signals and information about current and past energy consumption. The rate offering is at risk if the Company does not receive timely approval of the SMIP filed on August 14, 2009.

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<sup>50</sup> For additional detail and graphical depiction of SMIP, refer to Section 10.F.9.

Achieving estimated participation rates is a rate offering risk. The program will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy; and
- Modify or eliminate program, subject to PUC approval.

**Anticipated costs to participating customers**

There are no customer costs to participate.

**Ramp up strategy**

The implementation timeline for this rate offering will align with the smart metering infrastructure plan. See **Program start date with key schedule milestones** below for rollout.

**Marketing strategy**

Marketing activities will target eligible customers to inform them of the rate offering, its components, and the associated benefits primarily through bill inserts, direct mail, print and radio advertising, and in-bound call center contact.

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

Customer incentives will be included as part of the rate offering to encourage customers to reduce load during periods of peak system loading.

Eligible Program Measures & Incentives		
MEASURE	REBATE (\$)	REBATE LEVEL (%)
Critical Peak Rebate	Based on Load Reduction	

**Program start date with key schedule milestones**

**2009**

August – December                      Program development

**2010**

January – December                      Smart meter installations as per SMIP filed on August 14, 2009

Smart Meter System deployment

Rate tariff development and filing

Marketing plan development

**2011**

February	Smart Meter System Operable  Smart meter installations as per SMIP filed on August 14, 2009  Marketing plan deployed
March – April	Deploy thermostats
June – September	Thermostats and DLC Operable
October – December	Program review and adjustments

**2011**

Smart meter installations as per SMIP filed on August 14, 2009

**2012**

Smart meter installations as per SMIP filed on August 14, 2009

**Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 2 EM&V category.<sup>51</sup>

It is expected that the smart metering infrastructure will provide the method for EM&V of this rate.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will file with the Commission for approval of program modifications if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

**Administrative requirements – include utility staffing levels**

Allegheny Power will assign a program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. It is estimated that program management of all demand response rate offerings will require 1.0 FTE.

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<sup>51</sup> Reference Section 6.1.2. for details of Level 2 EM&V.



**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	0	0	0
<b>2010</b>	50,625	281	281
<b>2011</b>	172,125	4,303	4,303
<b>2012</b>	293,625	14,681	14,681

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
<b>2010</b>	\$103,823	\$0	\$0	\$13,750	\$0	<b>\$117,573</b>
<b>2011</b>	\$106,178	\$0	\$0	\$15,000	\$0	<b>\$121,178</b>
<b>2012</b>	\$108,586	\$0	\$0	\$14,444	\$0	<b>\$123,030</b>
<b>TOTAL</b>	<b>\$318,586</b>	<b>\$0</b>	<b>\$0</b>	<b>\$43,194</b>	<b>\$0</b>	<b>\$361,780</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	0	0	0.0	0.0
<b>2010</b>	36	36	0.2	0.2
<b>2011</b>	558	558	2.8	2.8
<b>2012</b>	1,903	1,903	9.5	9.5

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 1.5

Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

i. **TIME OF USE RATE (TOU) WITH CRITICAL PEAK PRICING RATE**

This program is the same as that listed under Commercial/Industrial Small Sector section.

j. **HOURLY PRICING OPTION (HPO) RATE**

This program is the same as that listed under Commercial/Industrial Small Sector section.

### 3.2.1 Low-Income Sector (as defined by 66 Pa. C.S. § 2806.1) Programs

In addition to programs listed below, the Low-Income Sector is eligible for all programs offered to the Residential Sector.

a. **RESIDENTIAL LOW INCOME HOME PERFORMANCE CHECK UP AUDIT & APPLIANCE REPLACEMENT PROGRAM (SINGLE & MULTI-FAMILY DWELLINGS)**

**Years during which program will be implemented**

January 2010 through May 2013

**Objective(s)**

The Residential Low Income Home Performance Check-up Audit and Appliance Replacement Program encourages low income residential customers to improve the overall efficiency of their home and reduce their carbon footprint through a holistic approach to energy consuming systems in the home.

**Target market**

This program targets low income ratepayers with household income up to 150% of the federal poverty level who own or rent. Allegheny Power currently has 39,140 confirmed or stated low income customers. This number includes those customers that received an energy assistance benefit and/or are participants in the Company's Customer Assistance Program (CAP) otherwise known as the Low Income Payment and Usage Reduction Program (LIPURP) and customers that are on level one payment agreements with a stated income that places them in the low income category. Based on census data, Allegheny Power could have as many as 90,000 residential customers up to 150% of the federal poverty level.

**Program description**

Program consists of a Home Check-Up Audit along with standard installed measures. The auditors will provide and install standard EE&C measures, with the customer's consent. The installed measures are as follows:

- Non Electric Hot Water heating customers – up to 6 CFLs
- Electric Hot Water heating customers – 6 CFLs, up to 3 Faucet Aerators, and 1 Low Flow Shower Head.

Under the Appliance Replacement component, the refrigerator and/or room air conditioner may qualify for replacement.

- Refrigerator – The auditor will determine if the customer's existing refrigerator is eligible for replacement based on the age and operational effectiveness. If eligible, the refrigerator will be replaced with a like-size Energy Star model. In addition, should the customer also have an older, inefficient freezer in use, the customer will be provided the opportunity to replace both the refrigerator and

freezer with a larger, more efficient refrigerator, so that the freezer may be removed.

- Room Air Conditioner - The auditor will determine if the customer's existing room air conditioner is eligible for replacement based on the age and operational effectiveness.

For homes with supplemental electric space heaters, auditors will provide messaging to the customer that weatherization services reduces the need to utilize the electric space heaters. Auditors will also be required to determine condition of the unit, need and appropriate use of space heater. If the auditor determines space heater use is needed as an alternative heating source because primary heating system is inoperable, steps will be taken to repair or replace primary heating source by accessing appropriate agency or contractor and accessing available funding sources.

The following residential programs are available to all participants.

- Residential Energy Star and High Efficiency Appliance Program
- Residential HVAC Efficiency Program
- Residential CFL Rewards Program

**Compliance Achievement Plan:**

- Allegheny Power expects to meet with available service providers to explain scope of program services and projected participation levels. Keeping service providers informed as to participation levels will enable them to address their workforce planning.
- Annual meetings with contractors/auditors will be scheduled.
- Allegheny Power plans targeted outreach to certain customer segments such as multi-family dwellings.

**Implementation strategy (including expected changes that may occur in different program years)**

Allegheny Power will contract implementation management and administration activities including sub-contracting for home audit services, networking, marketing activities, internal reporting, support external reporting and program evaluation.

Allegheny Power will oversee all contract work to ensure the scope of work is fully implemented, and will be responsible for all PUC reporting.

The implementation manager will handle customer issues and coordination of program services with home auditing contractors. Allegheny Power staff will also be available to address customer issues as needed.

Training of call center representatives, implementation management and home audit contractors will be held prior to roll-out of the program to ensure thorough understanding

of deliverables. Allegheny Power expects to have a close working relationship with all parties and will provide added training and direction when appropriate and as needed.

### **Program issues and risks and risk management strategy**

With the projected number of audits for all customers and increased comprehensive weatherization services for residential customers with low to moderate incomes, Allegheny Power has identified a resource constraint for performing home energy audits and comprehensive weatherization services. This has been an issue for several years as Allegheny Power has needed to contract with both Community Action Agencies and private contractors in order to have adequate coverage of Allegheny Power's service territory as well as have contractors able to provide the scope of energy conservation measures under the company's Low Income Usage Reduction Program (LIURP). It is Allegheny Power's intent to meet with available contractors prior to program start-up to review scope of work and projected participant levels to allow contractors the opportunity to increase and train their workforce.

Program issues and risks involved include the condition of the home and acquiring approval from the property owner for eligible appliance replacement, if the residence is a rental property. Allegheny Power plans to secure the required approvals for rental properties prior to any appliance replacement. In addition, all sub-contractors will be required to provide as part of the contract, Allegheny Power's standard level of liability insurance.

Achieving estimated participation rates is a program risk. The program will be reviewed monthly to determine reasonable participation. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy; and
- Modify or eliminate measures being offered.

### **Anticipated costs to participating customers**

There is no cost to the customer.

### **Ramp up strategy**

This program is expected to be 'full launched', that is, offered to the entire target population on the launch date.

### **Marketing strategy**

Marketing activities will target eligible customers to inform them of the program, its components, and the associated benefits through bill inserts, direct mail, in-bound call center contact, and through social service agencies.

Allegheny Power will continue to work with State agencies to identify low income customers so they may be enrolled into, and receive services from the low income residential programs.

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

Eligible Program Measures & Incentives		
MEASURE	REBATE (\$)	REBATE LEVEL (%)
Low Income Home Performance Check-Up & Appliance Replacement Program	100% of total expenditures	

#### **Program start date with key schedule milestones**

- Meet with implementation management: Third quarter 2009
- Obtain and meet with auditing contractors: Fourth quarter 2009
- Begin training of call center representatives: Fourth quarter 2009
- Program Start Date: January 2010
- Program End Date: May 31, 2013

Allegheny Power will monitor participation levels, spending and savings on a monthly and annual basis to determine if milestones are being achieved as outlined in the table.

#### **Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 1 EM&V category.<sup>52</sup>

A statistically valid sample of all requests, based on a 90% confidence level and a plus-or-minus 5% margin of error, will be selected for a follow-up phone call to verify that they received their energy efficiency kit and, including but not limited to, the number of and location of CFLs installed.

Reports will be prepared and maintained by the third-party administrator to verify adherence to customer eligibility requirements. A statistically valid sample, based on a 90% confidence level and a plus-or-minus 5% margin of error, will be selected annually for post-installation inspection. Inspections will include a site visit to verify energy-efficient technical specifications and quantities

Information that will be collected for EM&V purposes will include the quantity of the measures installed, nameplate data from the existing model, the capacity (size) of the existing model, the nameplate data for the new model and the capacity (size) of the new model. A customer survey will also be completed.

The refrigerator and room air conditioner replacement measures also include verification that an operating refrigerator or room air conditioner was removed from a customer's premise, and that the refrigerator or room air conditioner was appropriately recycled.

<sup>52</sup> Reference Section 6.1.2. for details of Level 1 EM&V.

The vendor is also responsible for verifying the nameplate data of the existing and new appliance.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that significant changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

Allegheny Power will place a code on the customer accounts indicating the date of service and related costs of the job. For customers in receipt of comprehensive installed measures, the account will trigger an alert for investigation should the customer's usage exceed 10% above historical usage prior to installed measures.

Allegheny Power is also considering including this program as part of the required program evaluation of company's existing Low Income Usage Reduction Program (LIURP).

#### **Administrative requirements – include utility staffing levels**

For inclusion of all PA low income weatherization programs, Allegheny Power will assign an internal program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. This will account for 0.50 FTE. In addition, it is estimated that 4.5 FTEs will be required from a third party administrator.

#### **Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	13,878	308	308
<b>2010</b>	13,570	2,714	2,714
<b>2011</b>	10,856	1,086	1,086
<b>2012</b>	9,770	977	977

#### **Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$72,914	\$30,000	\$51,227	\$7,824	\$264,135	<b>\$426,101</b>
<b>2010</b>	\$117,703	\$33,000	\$153,682	\$39,156	\$2,324,388	<b>\$2,667,930</b>
<b>2011</b>	\$114,458	\$37,000	\$153,682	\$30,934	\$857,467	<b>\$1,193,541</b>
<b>2012</b>	\$116,588	\$24,000	\$153,682	\$28,001	\$771,720	<b>\$1,093,991</b>
<b>TOTAL</b>	<b>\$421,664</b>	<b>\$124,000</b>	<b>\$512,273</b>	<b>\$105,915</b>	<b>\$4,217,710</b>	<b>\$5,381,563</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	368	368	0.1	0.1
<b>2010</b>	3,240	3,609	0.6	0.7
<b>2011</b>	1,296	4,905	0.3	1.0
<b>2012</b>	1,167	6,071	0.2	1.2

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 2.8

Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

Allegheny Power plans to access and educate customers on the availability of incentives from available funding sources including, but not limited to, Federal Tax Credits for Energy Efficiency under the “Emergency Economic Stabilization Act of 2008” and/or Stimulus Funds under the “American Recovery and Reinvestment Act of 2009” as appropriate, and as funding becomes available.<sup>53</sup>

<sup>53</sup> Reference Additional Funding Table in Section 10.F.2.



**b. RESIDENTIAL JOINT UTILITY USAGE MANAGEMENT PROGRAM – LOW INCOME WEATHERIZATION (LIURP, HOME CHECK UP & APPLIANCE REPLACEMENT)**

**Years during which program will be implemented**

January 2010 through May 2013

**Objective(s)**

The Joint Utility Usage Management Program (JUUMP), is a joint program with gas utilities and available to customers who heat with gas. This program enables leveraging of LIURP program dollars as well as DCED funding. This joint effort will provide a holistic approach to energy conservation and will minimize the impact on the customer's time by coordinating program services. This program is beginning as a cooperative effort between Allegheny Power and Columbia Gas.

**Target market**

Program will be available to low to moderate income customers with household incomes up to 200% of the federal poverty level.<sup>54</sup> Customers must also heat by gas and/or be eligible for any gas reduction measure. The initial program will target customers of both Allegheny Power and Columbia Gas.

Savings attributed to customers from 151% to 200% of federal poverty level will not be counted toward low income savings, however will be counted toward total goal.

**Program description**

The program consists of a Home Check-Up Audit with Appliance Replacement or LIURP Program measures for gas and electric customers.

Under the Appliance Replacement component, the refrigerator and/or room air conditioner may qualify for replacement.

- Refrigerator – The auditor will determine if the customer's existing refrigerator is eligible for replacement based on the age and operational effectiveness. If eligible, the refrigerator will be replaced with a like-size Energy Star model. In addition, should the customer also have an older, inefficient freezer in use, the customer will be provided the opportunity to replace both the refrigerator and freezer with a larger, more efficient refrigerator, so that the second freezer may be removed.

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<sup>54</sup> The threshold of 200% of the federal poverty level in the program was established to be consistent with that of the gas company's approved LIURP Program eligibility level and to avoid customer confusion. It should be noted that the Company will track program savings between 0-150% and 151-200% of the federal poverty level.

- Room Air Conditioner - The auditor will determine if the customer's existing room air conditioner is eligible for replacement based on the age and operational effectiveness.

For homes with supplemental electric space heaters, auditors will provide messaging to the customer that weatherization services reduces the need to utilize the electric space heaters. Auditors will also be required to determine condition of the unit, need and appropriate use of space heater. If the auditor determines space heater use is needed as an alternative heating source because primary heating system is inoperable, steps will be taken to repair or replace primary heating source by accessing appropriate agency or contractor and accessing available funding sources.

The following residential programs are available to all participants.

- Residential Energy Star and High Efficiency Appliance Program
- Residential HVAC Efficiency Program
- Residential CFL Rewards Program

**Compliance Achievement Plan:**

- Allegheny Power expects to meet with available service providers to explain scope of program services and projected participation levels. Keeping service providers informed as to participation levels will enable them to address their workforce planning.
- Annual meetings with contractors/auditors will be scheduled.
- Allegheny Power plans targeted outreach to certain customer segments such as multi-family dwellings.

**Implementation strategy (including expected changes that may occur in different program years)**

Allegheny Power will work closely with Columbia Gas Staff to ensure an effective and efficient process flow for coordination of program benefits.

Allegheny Power will contract implementation management and administration activities including sub-contracting for home audit services, weatherization services, networking, marketing activities, internal reporting, support external reporting and program evaluation.

Allegheny Power will oversee all contract work to ensure the scope of work is fully implemented, and will be responsible for all PUC reporting.

The implementation management will handle customer issues and coordination of program services with weatherization contractors. Allegheny Power staff will also be available to address customer issues as needed.

Training of call center representatives, implementation management and weatherization contractors will be held prior to roll-out of the program to ensure thorough understanding of deliverables. Allegheny Power expects to have a close working relationship with all parties and will provide added training and direction when appropriate and as needed.

### **Program issues and risks and risk management strategy**

With the projected number of audits for all customers and increased comprehensive weatherization services for residential customers with low to moderate incomes, Allegheny Power has identified a resource constraint for performing home energy audits and comprehensive weatherization services. This has been an issue for several years as Allegheny Power has needed to contract with both Community Action Agencies and private contractors in order to have adequate coverage of Allegheny Power's service territory as well as have contractors able to provide the scope of energy conservation measures under the company's Low Income Usage Reduction Program (LIURP). It is Allegheny Power's intent to meet with available contractors prior to program start-up to review scope of work and projected participant levels to allow contractors the opportunity to increase and train their workforce.

Program issues and risks involved include the condition of the home and acquiring approval from property owner for eligible appliance replacement if a rental property. Allegheny Power plans to obtain the required approvals for rental properties prior to any appliance replacement. In addition, all sub-contractors will be required to provide as part of the contract, Allegheny Power's standard level of liability insurance.

Achieving estimated participation rates is a program risk. The program will be reviewed monthly to determine reasonable participation. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy; and
- Modify or eliminate measures being offered.

### **Anticipated costs to participating customers**

There is no cost to the customer.

### **Ramp up strategy**

This program is expected to be available on the launch date.

### **Marketing strategy**

Marketing activities will target eligible customers to inform them of the program, its components, and the associated benefits through bill inserts, direct mail, in-bound call center contact, and through social service agencies.

AP will continue to work with State agencies to identify low income customers so they may be enrolled into, and receive services from the low income residential programs.

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

<b>Eligible Program Measures &amp; Incentives</b>		
<b>MEASURE</b>	<b>REBATE (\$)</b>	<b>REBATE LEVEL (%)</b>
Low Income Joint Utility Usage Management Program	100% up to \$5,000	

#### **Program start date with key schedule milestones**

- Meetings with Columbia Gas: Beginning April 2009 and on-going
- Meet with implementation management: Third quarter 2009
- Obtain and meet with contractors: Fourth quarter 2009
- Begin training of call center representatives: Fourth quarter 2009
- Program Start Date: January 2010
- Program End Date: May 31, 2013

Allegheny Power will monitor participation levels, spending and savings on a monthly and/or annual basis to determine if milestones are being achieved as outlined in the table.

#### **Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 1 EM&V category.<sup>55</sup>

A statistically valid sample of all energy efficiency kit requests, based on a 90% confidence level and a plus-or-minus 5% margin of error, will be selected for a follow-up phone call to verify that they received their energy efficiency kit requests and, including but not limited to, the number of and location of CFLs installed.

Reports will be prepared and maintained by the third-party administrator to verify adherence to customer eligibility requirements. A statistically valid sample, based on a 90% confidence level and a plus-or-minus 5% margin of error, will be selected annually for post-installation inspection. Inspections will include a site visit to verify energy-efficient technical specifications and quantities.

Information that will be collected for EM&V purposes will include the quantity of the measures installed, nameplate data from the existing model, the capacity (size) of the existing model, the nameplate data for the new model and the capacity (size) of the new model. A customer survey will also be completed.

The refrigerator and room air conditioner replacement measures also include verification that an operating refrigerator or room air conditioner was removed from a customer's premise, and that the refrigerator or room air conditioner was appropriately recycled.

<sup>55</sup> Reference Section 6.1.2. for details of Level 1 EM&V.

The vendor is also responsible for verifying the nameplate data of the existing and new appliances.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that significant changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

Allegheny Power will place a code on the customer accounts indicating the date of service and related costs of the job. For customers in receipt of comprehensive installed measures, the account will trigger an alert for investigation should the customer's usage exceed 10% above historical usage prior to installed measures.

Allegheny Power is also considering including this program as part of the required program evaluation of company's existing Low Income Usage Reduction Program (LIURP).

Program participation savings will be tracked for these two segments of Federal Poverty Level:

- 0% – 150%
- 151% – 200%

#### **Administrative requirements – include utility staffing levels**

For inclusion of all PA low income weatherization programs, Allegheny Power will assign an internal program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. This will account for 0.50 FTE. In addition, it is estimated that 4.5 FTEs will be required as a third party administrator.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	89,166	621	24,226
<b>2010</b>	89,076	3,749	146,230
<b>2011</b>	88,534	3,772	147,108
<b>2012</b>	87,989	3,795	147,990

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$74,009	\$30,000	\$51,227	\$9,328	\$233,381	<b>\$397,946</b>
<b>2010</b>	\$121,327	\$33,000	\$153,682	\$41,045	\$1,440,051	<b>\$1,789,105</b>
<b>2011</b>	\$123,860	\$37,000	\$153,682	\$33,652	\$1,365,802	<b>\$1,713,996</b>
<b>2012</b>	\$126,450	\$23,000	\$153,682	\$30,218	\$2,128,164	<b>\$2,461,514</b>
<b>TOTAL</b>	<b>\$445,646</b>	<b>\$123,000</b>	<b>\$512,273</b>	<b>\$114,243</b>	<b>\$5,167,398</b>	<b>\$6,362,561</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	589	589	0.1	0.1
<b>2010</b>	3,555	4,144	0.4	0.4
<b>2011</b>	3,576	7,721	0.4	0.8
<b>2012</b>	3,598	11,319	0.4	1.2

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 1.2

Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

Allegheny Power will access and educate customers on the availability of incentives from available funding sources including, but not limited to, Federal Tax Credits for Energy Efficiency under the “Emergency Economic Stabilization Act of 2008” and/or Stimulus Funds under the “American Recovery and Reinvestment Act of 2009” as appropriate, and as funding becomes available.<sup>56</sup>

<sup>56</sup> Reference Additional Funding Table in Section 10.F.2.

**c. RESIDENTIAL LOW INCOME ROOM AIR CONDITIONER REPLACEMENT PROGRAM**

**Years during which program will be implemented**

January 2010 through May 2013

**Objective(s)**

This program expands the existing Low Income Usage Reduction Program (LIURP) to include replacement of room air conditioner in an effort to increase energy savings.

**Target market**

This program targets low income ratepayers with household income up to 150% of the federal poverty level who own or rent. Allegheny Power currently has 39,140 confirmed or stated low income customers. This number includes those customers that received an energy assistance benefit and/or are participants in the Company's Customer Assistance Program (CAP) otherwise known as the Low Income Payment and Usage Reduction Program (LIPURP) and customers that are on level one payment agreements with a stated income that places them in the low income category. Based on census data, Allegheny Power could have as many as 90,000 residential customers up to 150% of the federal poverty level.

**Program description**

Program consists of comprehensive Low Income Usage Reduction Program (LIURP) measures as currently available with the addition of the replacement of a room air conditioner. The program requires the recycling for the replaced unit.

For homes with supplemental electric space heaters, auditors will provide messaging to the customer that weatherization services reduces the need to utilize the electric space heaters. Auditors will also be required to determine condition of the unit, need and appropriate use of space heater. If the auditor determines space heater use is needed as an alternative heating source because primary heating system is inoperable, steps will be taken to repair or replace primary heating source by accessing appropriate agency or contractor and accessing available funding sources.

The following Residential Programs are available to all participants:

- Residential Energy Star and High Efficiency Appliance Program
- Residential Heat Pump Efficiency Program
- Residential CFL Rewards Program

**Compliance Achievement Plan:**

- Allegheny Power expects to meet with available service providers to explain scope of program services and projected participation levels. Keeping service providers informed as to participation levels will enable them to address their workforce planning.
- Annual meetings with contractors/auditors will be scheduled.

**Implementation strategy (including expected changes that may occur in different program years)**

Allegheny Power will contract with implementation management and administration activities including sub-contracting for weatherization services, networking, marketing activities, internal reporting, support external reporting and program evaluation. This program will be implemented in conjunction with the existing LIURP program.

Allegheny Power will oversee all contract work to ensure the scope of work is fully implemented, and will be responsible for all PUC reporting.

The implementation management will handle customer issues and coordination of program services with home auditing contractors. Allegheny Power staff will also be available to address customer issues as needed.

Training of call center representatives, implementation management and weatherization contractors will be held prior to roll-out of the program to ensure thorough understanding of deliverables. Allegheny Power expects to have a close working relationship with all parties and will provide added training and direction when appropriate and as needed.

**Program issues and risks and risk management strategy**

With the projected number of audits for all customers and increased comprehensive weatherization services for residential customers with low to moderate incomes, Allegheny Power has identified a resource constraint for performing home energy audits and comprehensive weatherization services. This has been an issue for several years as Allegheny Power has needed to contract with both Community Action Agencies and private contractors in order to have adequate coverage of Allegheny Power's service territory as well as have contractors able to provide the scope of energy conservation measures under the company's Low Income Usage Reduction Program (LIURP). It is Allegheny Power's intent to meet with available contractors prior to program start-up to review scope of work and projected participant levels to allow contractors the opportunity increase and train their workforce.

Program issues and risks involved include the condition of the home and acquiring approval from property owner, if rental property, to replace appliance. Allegheny Power plans to obtain the required approvals for rental properties prior to any appliance replacement. In addition, all sub-contractors will be required to provide as part of the contract, Allegheny Power's standard level of liability insurance.



The program will be reviewed monthly to determine reasonable participation, spending and savings. If participation rates, spending or savings become a concern, the following steps will be evaluated:

- Modify marketing strategy; and
- Modify or eliminate measures being offered.

### **Anticipated costs to participating customers**

There is no cost to the customer.

### **Ramp up strategy**

This program is expected to be at ‘full launch’, that is, included in the existing LIURP Program as an added measure.

### **Marketing strategy**

Marketing activities will target eligible customers to inform them of the program, its components, and the associated benefits through bill inserts, direct mail, in-bound call center contact, and through social service agencies.

Allegheny Power will continue to work with State agencies to identify low income customers so they may be enrolled into, and receive services from the low income residential programs.

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

<b>Eligible Program Measures &amp; Incentives</b>		
<b>MEASURE</b>	<b>REBATE (\$)</b>	<b>REBATE LEVEL (%)</b>
Low Income Room Air Conditioner Replacement Program	100% of total expenditures	

### **Program start date with key schedule milestones**

- Meet with implementation management: Third quarter 2009
- Obtain and meet with auditing contractors: Fourth quarter 2009
- Begin training of call center representatives: Fourth quarter 2009
- Program Start Date: January 2010
- Program End Date: May 31, 2013

Allegheny Power will monitor participation levels, spending and savings on a monthly and annual basis to determine if milestones are being achieved as outlined in the table.

**Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 1 EM&V category.<sup>57</sup>

All technical information in support of energy-efficient measure qualification will be entered into the database. A statistically valid sample of all requests, based on a 90% confidence level and a plus-or-minus 5% margin of error, will be selected for a follow-up phone call to verify that they received their air conditioner. Allegheny Power proposes that program results be reported quarterly and annual EM&V reports be filed for each program by June 30th of the following year.

Allegheny Power will audit 20% of each certified contractor's projects in the first year and 5% per year thereafter for quality assurance. The Company expects that contractor training programs would be modified to address any trends discovered through the audit process. Among other things, data relative to the number of participants, the saturation within the Allegheny Power territory and the energy savings will be maintained in the database. Analysis of this data will occur annually to assess the success of the program. The program will be evaluated to determine overall cost-effectiveness, participation rates, and levels of achieved energy and demand savings. Allegheny Power may consider program modifications or improvements, and will notify the Commission if it appears that changes were warranted in this program. Reports will be prepared and maintained by the third-party administrator to verify adherence to customer eligibility requirements. A statistically valid sample, based on a 90% confidence level and a plus-or-minus 5% margin of error, will be selected annually for post-installation inspection. Inspections will include a site visit to verify energy-efficient technical specifications and quantities

Information that will be collected for EM&V purposes may include a description of the application, the quantity of the measure installed, nameplate data from the existing model, the capacity (size) of the existing model, the nameplate data for the new model and the capacity (size) of the new model.

The room air conditioner replacement measure also includes verification that an operating room air conditioner was removed from a customer's premise, and that the room air conditioner was appropriately recycled.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that significant changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

Allegheny Power will place a code on the customer accounts indicating the date of service and related costs of the job. For customers in receipt of comprehensive installed measures, the account will trigger an alert for investigation should the customer's usage exceed 10% above historical usage prior to installed measures.

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<sup>57</sup> Reference Section 6.1.2. for details of Level 1 EM&V.

Allegheny Power will also include this program as part of the required program evaluation of company's existing Low Income Usage Reduction Program (LIURP).

**Administrative requirements – include utility staffing levels**

For inclusion of all PA low income weatherization programs, Allegheny Power will assign an internal program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. This will account for 0.50 FTE. In addition, it is estimated that 4.5 FTEs will be required as a third party administrator.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	39,140	100	100
<b>2010</b>	39,040	597	597
<b>2011</b>	38,443	588	588
<b>2012</b>	37,855	579	579

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$72,184	\$30,000	\$0	\$7,824	\$64,875	<b>\$174,883</b>
<b>2010</b>	\$110,295	\$34,000	\$0	\$39,156	\$388,255	<b>\$571,706</b>
<b>2011</b>	\$112,717	\$36,000	\$0	\$30,934	\$352,589	<b>\$532,241</b>
<b>2012</b>	\$115,196	\$23,000	\$0	\$28,001	\$347,195	<b>\$513,391</b>
<b>TOTAL</b>	<b>\$410,392</b>	<b>\$123,000</b>	<b>\$0</b>	<b>\$105,915</b>	<b>\$1,152,914</b>	<b>\$1,792,221</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	21	21	0.0	0.0
<b>2010</b>	128	150	0.1	0.1
<b>2011</b>	127	276	0.1	0.2
<b>2012</b>	125	401	0.1	0.4

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 0.6

Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

Allegheny Power will access and educate customers on the availability of incentives from available funding sources including, but not limited to, Federal Tax Credits for Energy Efficiency under the “Emergency Economic Stabilization Act of 2008” and/or Stimulus Funds under the “American Recovery and Reinvestment Act of 2009” as appropriate, and as funding becomes available.<sup>58</sup>

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<sup>58</sup> Reference Additional Funding Table in Section 10.F.2.

### **3.3. Commercial/Industrial Small Sector (as defined by EDC Tariff) Programs**

#### **a. COMMERCIAL HVAC EFFICIENCY PROGRAM**

##### **Years during which program will be implemented**

January 2010 through May 2013

##### **Objective(s)**

The Commercial HVAC Efficiency Program encourages small and large commercial and industrial, and governmental/non-profit customers in Allegheny Power's Pennsylvania service territory to purchase central air conditioners and heat pumps that are more energy efficient than the federal energy efficiency standard requires.

##### **Target market**

This program targets small commercial and industrial, and governmental/non-profit customers in Allegheny Power's Pennsylvania service area who are interested in electric HVAC products. There are about 82,000 commercial customers in AP's PA territory of which about 36% cool buildings.

##### **Program description**

To encourage participation and to overcome cost barriers, this program provides a rebate for the customer to purchase a more energy-efficient unit.

##### **Implementation strategy (including expected changes that may occur in different program years)**

Allegheny Power will contract implementation administration activities including coordination with HVAC equipment distributors and installation contractors, marketing activities, rebate processing services provider contractor oversight, reporting, and program evaluation.

Allegheny Power will contract directly with rebate processing service providers.

Future enhancements may include renewable technologies.

##### **Program issues and risks and risk management strategy**

The current economic downturn may be a risk to program success. To overcome this factor, Allegheny Power will bring to bear the resources available through Allegheny Power and state agencies, possible tax credits as well as emphasize potential energy and maintenance savings. An additional risk is that programs may not be approved in time to align with commercial and industrial customers' budget cycles for 2010. Possible mitigation strategies include:

- Request phased review and approvals for those programs at risk due to budget planning cycles.
- Consider contacting eligible customers in advance of approvals to alert them of a possible program.

Achieving estimated participation rates is a program risk. The program will be reviewed monthly to determine if participation rates are as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy;
- Modify incentives; and
- Modify or eliminate measures being offered.

Another risk is the possibility of an increase in the federal energy efficiency standards for HVAC equipment resulting in reduced energy savings based on the current HVAC measure requirements. If and when these standards change, HVAC requirements and/or energy savings will be modified to reflect the energy efficiency standards of HVAC equipment available at that time. The program manager will be responsible for monitoring these changes and updating each appliance measure as needed.

#### **Anticipated costs to participating customers**

The customer will be required to pay the cost of the new device less rebates. The average expected customer cost per unit is approximately 50% of incremental costs. Approximate costs are:

- Commercial Air Conditioner: \$2,300
- Commercial Heat Pump: \$2,500

#### **Ramp up strategy**

Begin communicating program in the fourth quarter of 2009 so Commercial and Industrial customers can plan and budget for projects in 2009. This program is expected to be 'full launched' that is, offered to the entire target population on the launch date. Allegheny Power will execute the launch in this manner since it will have had some experience in program management in another state prior to the Pennsylvania launch. It is assumed that the ramp up period for this program will occur in the 2009 and 2010 plan years. In the 2009 plan year, the participation rates are projected to be 33% of future year levels. In the 2010 plan year, the participation rates are projected to be 50% of future year levels.

#### **Marketing strategy**

Marketing activities will target eligible customers to inform them of the program, its components, and the associated benefits through bill inserts, direct mail, Allegheny Power website, trade shows, the business customer newsletter, and key account managers. Allegheny Power will work with HVAC contractors to market HVAC products with higher efficiency than required by federal standard.

Marketing activities will include leveraging and promoting federal and state funding opportunities (stimulus dollars, tax incentives, grants, etc.) that may be associated with this program.<sup>59</sup>

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

<b>Eligible Program Measures &amp; Incentives</b>		
<b>MEASURE</b>	<b>REBATE (\$)</b>	<b>REBATE LEVEL (% of Incremental \$)</b>
High Efficiency Air Conditioner (\$35 per ton, 15 SEER)	\$175	50%
High Efficiency Heat Pump (\$75 per ton, 15 SEER)	\$375	48%

### **Program start date with key schedule milestones**

Allegheny Power will determine and measure key milestones achieved as referenced in program participation levels and savings tables for respective years.<sup>60</sup>

- Implementation: Award vendor contracts fourth quarter 2009
- Introduction of program to target customers: Begin fourth quarter 2009
- Program Marketing: Begin fourth quarter 2009
- Program Start Date: January 1, 2010
- Program End Date: May 31, 2013<sup>61</sup>

### **Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 1 EM&V category.<sup>62</sup>

All rebate applications will be reviewed upon receipt to verify adherence to eligibility requirements and applicant eligibility. A statistically valid sample of all rebate applications, based on 90% confidence level and a plus-or-minus 5% margin of error, will be selected for survey.

Information that will be collected for EM&V purposes will include the quantity of the measure installed, nameplate data from the existing model, the capacity (size) of the existing model, the nameplate data for the new model and the capacity (size) of the new model. A customer survey will also be completed.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

<sup>59</sup> Reference Additional Funding Table in Section 10.F.2.

<sup>60</sup> Start date and milestones based on assumed Plan approval in fourth quarter 2009.

<sup>61</sup> All measures subject to modification or elimination if federal standard changes or other changes warrant.

<sup>62</sup> Reference Section 6.1.2. for details of Level 1 EM&V.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

**Administrative requirements – include utility staffing levels**

Allegheny Power will assign a program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. It is estimated that program management will require 0.25 FTE.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	126,014	146	146
<b>2010</b>	127,526	884	884
<b>2011</b>	129,057	1,790	1,790
<b>2012</b>	130,605	1,811	1,811

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$331,059	\$20,000	\$179	\$14,318	\$31,091	<b>\$396,647</b>
<b>2010</b>	\$172,520	\$49,440	\$1,086	\$87,730	\$188,784	<b>\$499,560</b>
<b>2011</b>	\$176,433	\$50,924	\$2,199	\$99,719	\$352,390	<b>\$681,665</b>
<b>2012</b>	\$180,435	\$30,596	\$2,225	\$91,166	\$356,619	<b>\$661,041</b>
<b>TOTAL</b>	<b>\$860,448</b>	<b>\$150,960</b>	<b>\$5,689</b>	<b>\$292,932</b>	<b>\$928,884</b>	<b>\$2,238,914</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	142	142	0.1	0.1
<b>2010</b>	860	1,001	0.5	0.6
<b>2011</b>	1,740	2,742	1.0	1.5
<b>2012</b>	1,761	4,503	1.0	2.5



**Cost-effectiveness – include TRC for each program year and cumulative**

The TRC for this program is calculated to be 1.0

Refer to Table 7A for TRC for each program year

**Other information deemed appropriate**

In an effort to enable all customer classes to gain added benefits, Allegheny Power will educate customers on the availability of incentives from other funding sources including, but not limited, to Federal Tax Credits for Energy Efficiency under the “Emergency Economic Stabilization Act of 2008” and/or Stimulus Funds under the “American Recovery and Reinvestment Act of 2009” as appropriate and as funding is available.<sup>63</sup>

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<sup>63</sup> Reference Additional Funding Table in Section 10.F.2.

**b. COMMERCIAL LIGHTING EFFICIENCY PROGRAM**

**Years during which program will be implemented**

January 2010 through May 2013.

**Objective(s)**

The Commercial Lighting Efficiency Program encourages small and large, commercial and industrial and governmental/non-profit customers in Allegheny Power's Pennsylvania service territory to upgrade to state-of-the-art energy efficient lighting technologies.

**Target market**

The program will be targeted at small and large, commercial and industrial customers in the Allegheny Power's Pennsylvania service territory with building facilities.

**Program description**

The program provides rebates to Commercial & Industrial customers for installing:

- T8 lamps: Replacing T12 lamps that includes the reduction in the number of lamps per fixture by 1 to 2 fewer lamps the installation of high-efficiency electronic ballasts or achieving required energy savings.
- T5 lights: Replace high-intensity discharge high bay style lights;
- Occupancy Sensors (wall-plate style sensors to replace conventional switches); and
- LED Exit Signs: Replacing incandescent exit signs.

**Implementation strategy (including expected changes that may occur in different program years)**

Allegheny Power will contract implementation administration activities including coordination with HVAC equipment distributors and installation contractors, marketing activities, rebate processing services provider contractor oversight, reporting, and program evaluation.

Allegheny Power will contract directly with rebate processing service providers.

Allegheny Power anticipates this program will be revised/expanded during the plan to include LED and other new lighting technologies, in conjunction with annual reviews in consideration of program performance, budget, cost effectiveness and savings opportunities.

**Program issues and risks and risk management strategy**

A significant risk to the program success is customers' access to capital to finance energy efficiency and conservation programs. The rebate level structure along with resources

available through state agencies and possible tax credits<sup>64</sup> along with emphasizing potential energy and maintenance savings are expected to mitigate this risk.

An additional risk is that programs may not be approved in time to align with commercial and industrial customers' budget cycles for 2010. Possible mitigation strategies include:

- Request phased review and approvals for those programs at risk due to budget planning cycles.
- Consider contacting eligible customers in advance of approvals to alert them of a possible program.

Achieving estimated participation rates is a program risk. The program will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy;
- Modify incentives; and
- Modify or eliminate measures being offered.

Another risk is the possibility of an increase in the federal energy efficiency standards for commercial lighting equipment resulting in reduced energy savings based on the current commercial lighting equipment measure requirements. If and when these standards change, commercial lighting equipment requirements and/or energy savings will be modified to reflect the energy efficiency standards of commercial lighting equipment available at that time. The program manager will be responsible for monitoring these changes and updating each measure as needed.

#### **Anticipated costs to participating customers**

- |                     |                 |
|---------------------|-----------------|
| • T8                | \$200 / Fixture |
| • T5                | \$200 / Fixture |
| • LED Exit          | \$65 / Sign     |
| • Occupancy Sensors | \$65 / Sensor   |

#### **Ramp up strategy**

Begin communicating program in the fourth quarter of 2009 so customers can plan and budget for projects in 2009. This program is expected to be at 'full launch' that is, offered to the entire target population on the launch date. AP will execute the launch in this manner since it will have had some experience in program management in another state prior to the Pennsylvania launch. It is assumed that the ramp up period for this program will occur in the 2009 and 2010 plan years. In the 2009 plan year, the participation rates are projected to be 33% of future year levels. In the 2010 plan year, the participation rates are projected to be 50% of future year levels.

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<sup>64</sup> Reference Additional Funding Table in Section 10.F.2.

### Marketing strategy

Marketing activities will target eligible customers to inform them of the program, its components, and the associated benefits through bill inserts, direct mail, Allegheny Power website, trade shows, the business customer newsletter, and key account managers. Allegheny Power will work with HVAC contractors to market HVAC products with higher efficiency than required by federal standard.

Marketing activities will include leveraging and promoting federal and state funding opportunities (stimulus dollars, tax incentives, grants, etc.) that may be associated with this program.<sup>65</sup>

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

Eligible Program Measures & Incentives		
MEASURE	REBATE (\$)	REBATE LEVEL (% of Incremental \$)
T8s	\$14	38%
T5s	\$25	38%
Occupancy Sensors	\$25	32%
LED Exit Signs	\$15	47%

### Program start date with key schedule milestones

Allegheny Power will determine and measure key milestones achieved as referenced in program participation levels and savings tables for respective years.

- Program Marketing: Begin in early 4<sup>th</sup> quarter 2009 so that projects can be added to customers' 2010 budget.<sup>66</sup>
- Implementation: Award vendor contracts fourth quarter 2009
- Program Start Date: January 2010
- Program End Date: May 31, 2013<sup>67</sup>

### Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant

This program falls into the Level 1 EM&V category.<sup>68</sup>

All rebate applications will be reviewed upon receipt to verify adherence to eligibility requirements and applicant eligibility. A statistically valid sample of all rebate

<sup>65</sup> Reference Additional Funding Table in Section 10.F.2.

<sup>66</sup> Discussions with customers are expected to begin prior to plan approval, but with caveat that program is contingent upon PUC approval of EEC and DR Plan.

<sup>67</sup> All projects accepted must be completed by May 31, 2013. This assumes Plan will end May 31, 2013.

<sup>68</sup> Reference Section 6.1.2. for details of Level 1 EM&V.

applications, based on 90% confidence level and a plus-or-minus 5% margin of error, will be selected for survey.

Information that will be collected for EM&V purposes will include the quantity of the measure installed, nameplate data from the existing model, the capacity (size) of the existing model, the nameplate data for the new model and the capacity (size) of the new model. A customer survey will also be completed.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

#### **Administrative requirements – include utility staffing levels**

Allegheny Power will assign a program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. It is estimated that program management will require 0.25 FTE.

#### **Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	12,507,579	669	29,595
<b>2010</b>	12,561,122	5,028	198,139
<b>2011</b>	12,457,308	7,659	342,588
<b>2012</b>	12,222,552	6,307	174,325

#### **Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$327,751	\$40,000	\$822	\$44,122	\$447,177	<b>\$859,872</b>
<b>2010</b>	\$161,241	\$98,880	\$6,177	\$164,539	\$2,993,455	<b>\$3,424,292</b>
<b>2011</b>	\$164,898	\$101,848	\$9,409	\$138,491	\$4,786,038	<b>\$5,200,684</b>
<b>2012</b>	\$168,638	\$61,192	\$7,748	\$134,299	\$2,608,064	<b>\$2,979,942</b>
<b>TOTAL</b>	<b>\$822,528</b>	<b>\$301,920</b>	<b>\$24,156</b>	<b>\$481,452</b>	<b>\$10,834,735</b>	<b>\$12,464,790</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	8,166	8,166	1.8	1.8
<b>2010</b>	54,561	62,726	11.6	13.4
<b>2011</b>	94,431	157,157	21.3	34.8
<b>2012</b>	45,991	203,148	7.9	42.7

**Cost-effectiveness – include TRC for each program year and cumulative**

The Commercial Lighting Program’s TRC is 5.8

Refer to Table 7A for TRC for each program year

**Other information deemed appropriate**

Allegheny Power will access and educate customers on the availability of incentives from available funding sources including, but not limited, to Federal Tax Credits for Energy Efficiency under the “Emergency Economic Stabilization Act of 2008” and/or Stimulus Funds under the “American Recovery and Reinvestment Act of 2009” as appropriate, and as funding becomes available.<sup>69</sup>

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<sup>69</sup> Reference Additional Funding Table in Section 10.F.2.

**c. CUSTOM TECHNOLOGY APPLICATIONS PROGRAM****Years during which program will be implemented**

January 2010 through May 2013

**Objective(s)**

The program encourages energy and demand reductions in small and large, commercial and industrial, and governmental/non-profit customers. The program will focus on improving the energy efficiency for specific process and applications, such as: lighting systems,<sup>70</sup> compressed air, chillers, refrigeration, variable speed drives,<sup>71</sup> motors, energy management systems, fan and pump systems, renewable energy, LED, and combined heat-power systems.

**Target market**

The program will be targeted at small and large, commercial and industrial, and governmental/non-profit customers in the Allegheny Power's Pennsylvania service territory, with usage between 1 million up to 2.5 million kWh's per year.

**Program description**

The Custom Technology Applications Program is focused on reducing energy & demand in the small and large, commercial and industrial and governmental/non-profit customers with usage of 1 million - 2.5 million kWh/year. The program will focus on improving the energy efficiency for specific processes and applications through the onsite energy audit. Applications such as lighting systems, compressed air, chillers, refrigeration, variable speed drives, motors, energy management systems, fan/pumps systems, renewable energy and combined heat-power systems will be considered. The customer will directly contract with a third party provider to identify the energy efficiency and conservation opportunities. The customer will submit these opportunities/projects to Allegheny Power for review and approval. Allegheny Power will provide incentives to the customer up to 25% of the capitol investment, up to \$100,000.00 of the project, to obtain the energy and demand savings. Allegheny Power has also capped the annual program incentive budget at \$1 Million in an effort to control plan costs.

There are no specific limitations for eligible measures, other than that they must be electro-technology based and each measure must be individually cost effective. The following measures are the most commonly applied in industrial/commercial facilities:

- Lighting systems
- Compressed air
- Chillers
- Refrigeration
- Variable speed drives

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<sup>70</sup> For applications beyond Commercial Lighting Program.

<sup>71</sup> For applications beyond Commercial and Industrial Drives Program.

- Motors
- Energy management systems
- Fan/pumps systems
- Combined heat-power systems.

The comprehensive audit and report are required to include the Energy Star Portfolio Manager to assess building quartile ranking. The results must be submitted to Allegheny Power as verification that the EE&C project is justified. Building already in the top quartile will not qualify for the incentive. The eligible measures are all existing Allegheny Power Commercial programs for which the customer qualifies plus custom EE&C.

Projects will be awarded based on kWh savings.

Future enhancements include providing governmental audits and audit rebates.

### **Implementation strategy (including expected changes that may occur in different program years)**

Allegheny Power will review the proposals and use a selective evaluation process to maximize the energy savings investment under the program. Allegheny Power will screen the projects based on, but not limited to, a TRC test to determine which projects and/or sub-measures are cost effective. Allegheny Power will then use a ranking methodology and financial analyses to determine which projects provide the best energy savings return on investment. To verify which projects are technically viable, Allegheny Power will rely on auditing partners to perform the energy audits and studies on the selected projects. The project review process will be iterative until the targeted kWh reductions are reached or the yearly capital incentive cap has been reached.

### **Program issues and risks and risk management strategy**

A significant risk to the program success is customers' access to capital to finance energy efficiency and conservation programs. With the capital incentive, or up to 25% of the project cost, the Company believes that these projects will be very attractive due to the short payback period plus the reduction in operating costs because of the lower energy usage.

The program will be reviewed to determine if participation rates are not as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Increase and/or modify marketing strategy;
- Increase award structures if TRC test and EE&C Plan budget justify; and
- Eliminate the program.

An additional risk is that programs may not be approved in time to align with commercial and industrial customers' budget cycles for 2010. Possible mitigation strategies include:

- Request phased review and approvals for those programs at risk due to budget planning cycles; and



- Consider contacting eligible customers in advance of approvals to alert them of a possible program.

**Anticipated costs to participating customers**

An EE&C comprehensive commercial audit costs approximately \$.10-.50/SF of the building, and the additional anticipated cost would be 75% of capital cost of project.

**Ramp up strategy**

As shown by the incentive strategy above, the program will be more heavily weighted with incentives in the early years to attract end-users with larger projects that will capture larger energy savings opportunities. Given the nature of capital budgeting cycles, Allegheny Power expects that it will also take several budgeting cycles to get these projects into the customer’s capital construction budgets. All customers will be eligible to participate in the program in each year of the Plan.<sup>72</sup>

**Marketing strategy**

This program will be offered directly to a customer by soliciting proposals that will provide energy and demand savings by improving specific electrical processes or applications.

Marketing activities will include leveraging and promoting federal and state funding opportunities (stimulus dollars, tax incentives, grants, etc.) that may be associated with this program.<sup>73</sup>

Allegheny Power’s Account Management staff and direct mail information will be used to contact these commercial and industrial customers.

Allegheny Power will promote a whole building approach to energy conservation for government entities by offering increased incentives for select projects and measures under the Custom Technology Applications Program to those government entities that have undergone building energy audits. This program will provide information on the benefits of guaranteed energy savings contracts to government entities and will be promoted to all consumers in the sector. The program will be targeted to the highest energy users in this sector.

**Eligible measures and incentive strategy include tables for each year of program, as appropriate showing financial incentives & rebate levels**

Eligible Program Measures & Incentives		
MEASURE	REBATE (\$)	REBATE LEVEL (%)
Custom Technology Application Program	25% up to \$100,000	

<sup>72</sup> Customers may participate in multiple years if their proposals are accepted based on screening criteria.

<sup>73</sup> Reference Additional Funding Table in Section 10.F.2.

**Program start date with key schedule milestones**

Allegheny Power will determine and measure key milestones achieved as referenced in program participation levels and savings tables for respective years.

- Program Marketing: Begin discussions with key customers early 4<sup>th</sup> quarter 2009 so that projects can be added to customers' 2010 budget.<sup>74</sup>
- Program Start Date: January 2010
- Project Proposals Awarded: December of each year
- Program End Date: May 31, 2013<sup>75</sup>

**Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 2 EM&V category.<sup>76</sup>

It is assumed that most changes and/or improvements to processes and applications resulting in energy efficiency improvements will require system level spot or short-term measurements. Because of the overall size of customers' usage in industrial/commercial facilities, utility billing records may not provide discrete results to verify the improvement in energy efficiency. Depending on type of process of application that is being modified, baseline measurements may also be required to determine existing loading, usage, or time of operation levels. If the customer uses the energy savings to fund the project, before and after type measurement will be required as a part of the EM&V process. These evaluations would be considered in the application of all measures.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

**Administrative requirements – include utility staffing levels**

This program would be managed and administered by Allegheny Power. Based on the evaluation process, contract administration, and utility accounting needs, Allegheny Power estimates 0.5 FTE will be required to administer the program. Allegheny's existing Account Management staff will be also be utilized to support the program.

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<sup>74</sup> Discussions with customers are expected to begin prior to plan approval, but with caveat that program is contingent upon PUC approval of EEC and DR Plan.

<sup>75</sup> All projects accepted must be completed by May 31, 2013. This assumes Plan will end May 31, 2013.

<sup>76</sup> Reference Section 6.1.2. for details of Level 2 EM&V.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	82,227	0	0
<b>2010</b>	83,214	15	15
<b>2011</b>	84,212	21	21
<b>2012</b>	85,223	21	21

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$331,331	\$2,500	\$8,976	\$0	\$0	<b>\$342,807</b>
<b>2010</b>	\$173,629	\$6,180	\$133,154	\$31,885	\$728,120	<b>\$1,072,968</b>
<b>2011</b>	\$177,568	\$6,365	\$196,794	\$35,068	\$970,810	<b>\$1,386,604</b>
<b>2012</b>	\$181,595	\$3,825	\$198,689	\$33,010	\$982,460	<b>\$1,399,579</b>
<b>TOTAL</b>	<b>\$864,123</b>	<b>\$18,870</b>	<b>\$537,613</b>	<b>\$99,962</b>	<b>\$2,681,390</b>	<b>\$4,201,958</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	0	0	0.0	0.0
<b>2010</b>	2,266	2,266	0.6	0.6
<b>2011</b>	3,276	5,542	0.9	1.5
<b>2012</b>	2,984	8,525	0.8	2.2

**Cost-effectiveness – include TRC for each program year and cumulative**

The Custom Technology Applications Program's TRC is 4.7  
Refer to Table 7A for TRC for each program year

**Other information deemed appropriate**

Allegheny Power will access and educate customers on the availability of incentives from available funding sources including, but not limited, to Federal Tax Credits for Energy Efficiency under the “Emergency Economic Stabilization Act of 2008” and/or Stimulus Funds under the “American Recovery and Reinvestment Act of 2009” as appropriate, and as funding becomes available.<sup>77</sup>

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<sup>77</sup> Reference Additional Funding Table in Section 10.F.2.

**d. TIME OF USE (TOU) WITH CRITICAL PEAK PRICING RATE****Years during which program will be implemented**

January 1, 2011 through May 2013

**Objective(s)**

This rate offering encourages residential, small commercial and industrial and governmental/non-profit customers to lower demand and energy consumption during peak load hours.

**Target market**

This rate offering targets Allegheny Power's small commercial and industrial and governmental/non-profit customers under 500 kW in Allegheny Power's Pennsylvania service area receiving default service, in conjunction with the installation of smart metering and the related infrastructure.

**Program description**

TOU rates reflect the cost of serving customers during different time periods, but do not change as frequently as hourly. TOU encourages residential and commercial, industrial, government, school, and non-profit customers under 500 kW to lower their demand and energy consumption during on-peak periods by charging a higher price that reflects the higher cost of serving customers, and charging lower prices during off-peak periods that reflects the lower cost of serving customers. TOU also includes critical peak pricing that is designed to address the short-term need to reduce demand at the time of the system peak by charging prices significantly higher than on-peak periods. Critical peak pricing periods will vary in frequency and duration using predefined or notified peak hours, but will balance the need to keep the period as short as possible to effectively allow customers to reduce demand or shift usage to lower cost periods. TOU is voluntary and is only available to customers that are receiving utility-provided default service. TOU relies on a smart meter to measure the customer's demand and energy usage during the various TOU periods and the addition of an in-home/in-facility display improves customer notification/communication regarding peak periods.<sup>78</sup>

**Implementation Strategy**

This rate offering requires the installation of a smart meter to collect the customer's hourly energy consumption. The addition of an in-home/in-facility display improves customer communications regarding their energy consumption and billing. This rate offering leverages the installation of smart metering and related infrastructure to provide the customer with timely information regarding their usage.

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<sup>78</sup> For additional detail and graphical depiction of SMIP, refer to Section 10.F.9.

### **Program issues and risks and risk management strategy**

This rate offering is most effective when coupled with Smart Metering Infrastructure that provides customers with real-time price signals and information about current and past energy consumption. The rate offering is at risk if the Company does not receive timely approval of the SMIP filed on August 14, 2009.

Achieving estimated participation rates is a program risk. The rate offering will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the Company will modify the marketing strategy.

### **Anticipated costs to participating customers**

There are no customer costs to participate.

### **Ramp up strategy**

The implementation timeline for this program will align with the smart metering infrastructure plan. See **Program start date with key schedule milestones** below for rollout.

### **Marketing strategy**

Marketing activities will target eligible customers to inform them of the rate offering, its components, and the associated benefits primarily through bill inserts, direct mail, print and radio advertising, and in-bound call center contact.

### **Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

The incentive for this rate offering will be included within the rate.

<b>Eligible Program Measures &amp; Incentives</b>		
<b>MEASURE</b>	<b>REBATE (\$)</b>	<b>REBATE LEVEL (%)</b>
Time of Use with Critical Peak Pricing	N/A	N/A

### **Program start date with key schedule milestones**

#### **2009**

August – December                      Program development

#### **2010**

January – December                      Smart meter installations as per SMIP filed on August 14, 2009

Smart Meter System deployment

	Rate tariff development and filing
	Marketing plan development
<b>2011</b>	
February	Smart Meter System Operable
2009	Smart meter installations as per SMIP filed on August 14,
	Marketing plan deployed
March – April	Deploy thermostats
June – September	Thermostats and DLC Operable
October – December	Program review and adjustments
<b>2011</b>	
	Smart meter installations as per SMIP filed on August 14, 2009
<b>2012</b>	
	Smart meter installations as per SMIP filed on August 14, 2009

**Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 2 EM&V category.<sup>79</sup>

It is expected that the smart metering infrastructure will provide the method for EM&V of this rate.

Allegheny Power will file with the Commission for approval of program modifications if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

**Administrative requirements – include utility staffing levels**

Allegheny Power will assign a program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. It is estimated that program management of all demand response rate offerings will require 1.0 FTE.

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<sup>79</sup> Reference Section 6.1.2. for details of Level 2 EM&V.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	69,893	0	0
<b>2010</b>	70,732	220	220
<b>2011</b>	70,732	1,980	1,980
<b>2012</b>	70,732	5,941	5,941

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
<b>2010</b>	\$130,740	\$0	\$0	\$11,688	\$0	<b>\$142,427</b>
<b>2011</b>	\$133,705	\$0	\$0	\$12,750	\$0	<b>\$146,455</b>
<b>2012</b>	\$136,738	\$0	\$0	\$12,277	\$0	<b>\$149,015</b>
<b>TOTAL</b>	<b>\$401,183</b>	<b>\$0</b>	<b>\$0</b>	<b>\$36,715</b>	<b>\$0</b>	<b>\$437,898</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	0	0	0.0	0.0
<b>2010</b>	206	206	0.1	0.1
<b>2011</b>	1,858	1,858	1.0	1.0
<b>2012</b>	5,574	5,574	2.9	2.9

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 2.5

Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

TOU is offered as an optional service and does not replace the default service program approved by Commission order entered July 25, 2008 at Docket No. P-00072342.



**e. HOURLY PRICING OPTION (HPO) RATE****Years during which program will be implemented**

January 1, 2011 through May 2013

**Objective(s)**

This rate offering encourages residential, small commercial and industrial, and governmental/non-profit customers to lower demand and energy consumption during peak load hours.

**Target market**

This rate offering targets Allegheny Power's small commercial and industrial, and governmental/non-profit customers under 500 kW in Allegheny Power's Pennsylvania service area receiving default service, in conjunction with the installation of smart metering and related infrastructure.

**Program description**

The HPO reflects the different cost of energy during each hour and encourages residential and commercial, industrial, government, school, and non-profit customers under 500 kW to lower their demand and energy consumption during high priced periods and/or shift usage to low priced periods. Billing for the HPO is calculated from the PJM hourly market pricing for the AP Zone and includes the price of energy, capacity, ancillary services, alternative energy compliance, and any other Federal Energy Regulatory Commission and/or PJM charges directly related to the HPO, as adjusted for taxes. Participants can receive a daily updated approximation of their monthly bill, to date (since the prior bill), as well as an approximation of their electricity cost for the prior day. The HPO is voluntary and is only available to customers that are receiving utility-provided default service. The HPO relies on the installation of a smart meter<sup>80</sup> to collect the customer's hourly energy consumption and the addition of an in-home/in-facility display improves customer communications regarding their energy consumption and billing.

**Implementation Strategy**

This rate offering relies upon the installation of a smart meter to collect the customer's hourly energy consumption. The addition of an in-home/in-facility display improves customer communications regarding their energy consumption and billing. This rate offering leverages the installation of smart metering and related infrastructure to provide customers with timely information regarding their energy usage.

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<sup>80</sup> For additional detail and graphical depiction of SMIP, refer to Section 10.F.9.

**Program issues and risks and risk management strategy**

This rate offering is most effective when coupled with Smart Metering Infrastructure that provides customers with real-time price signals and information about current and past energy consumption. The rate offering is at risk if the Company does not receive timely approval of the SMIP filed on August 14, 2009.

Achieving estimated participation rates is a rate offering risk. The program will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the Company will modify the marketing strategy.

**Anticipated costs to participating customers**

There are no customer costs to participate.

**Ramp up strategy**

The implementation timeline for this rate offering will align with the smart metering infrastructure plan. See **Program start date with key schedule milestones** below for rollout.

**Marketing strategy**

Marketing activities will target eligible customers to inform them of the rate offering, its components, and the associated benefits primarily through bill inserts, direct mail, print and radio advertising, and in-bound call center contact.

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

<b>Eligible Program Measures &amp; Incentives</b>		
<b>MEASURE</b>	<b>REBATE (\$)</b>	<b>REBATE LEVEL (%)</b>
Hourly Pricing Option	N/A	N/A

**Program start date with key schedule milestones****2009**

August – December                      Program development

**2010**

January – December                      Smart meter installations as per SMIP filed on August 14, 2009

Smart Meter System deployment

Rate tariff development and filing

	Marketing plan development
<b>2011</b>	
February	Smart Meter System Operable
2009	Smart meter installations as per SMIP filed on August 14,
	Marketing plan deployed
March – April	Deploy thermostats
June – September	Thermostats and DLC Operable
October – December	Program review and adjustments

**2011**

Smart meter installations as per SMIP filed on August 14, 2009

**2012**

Smart meter installations as per SMIP filed on August 14, 2009

**Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

It is expected that the smart metering infrastructure will provide the method for EM&V of this rate.

Allegheny Power will file with the Commission for approval of program modifications if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

**Administrative requirements – include utility staffing levels**

Allegheny Power will assign a program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. It is estimated that program management of all demand response rate offerings will require 1.0 FTE.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	12,334	0	0
<b>2010</b>	12,482	39	39
<b>2011</b>	12,482	349	349
<b>2012</b>	12,482	1,048	1,048

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
<b>2010</b>	\$23,072	\$0	\$0	\$2,063	\$0	<b>\$25,134</b>
<b>2011</b>	\$23,595	\$0	\$0	\$2,250	\$0	<b>\$25,845</b>
<b>2012</b>	\$24,130	\$0	\$0	\$2,167	\$0	<b>\$26,297</b>
<b>TOTAL</b>	<b>\$70,797</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,479</b>	<b>\$0</b>	<b>\$77,276</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	0	0	0.0	0.0
<b>2010</b>	36	36	0.0	0.0
<b>2011</b>	328	328	0.2	0.2
<b>2012</b>	984	984	0.5	0.5

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 2.5

Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

The HPO is offered as an optional service and does not replace the default service program approved by Commission order entered July 25, 2008 at Docket No. P-00072342.

f. **PROGRAMMABLE CONTROLLABLE THERMOSTAT (PCT) PROGRAM**

This program is the same as that listed under Residential Sector section.

g. **PAY AHEAD (SMART) SERVICE RATE**

This program is the same as that listed under Residential Sector section.

h. **COMMERCIAL AND INDUSTRIAL DRIVES PROGRAM**

This program is the same as that listed under Commercial/Industrial Large Sector section.

i. **CUSTOMER LOAD RESPONSE PROGRAM**

This program is the same as that listed under Commercial/Industrial Large Sector section.

j. **CUSTOMER RESOURCES DEMAND RESPONSE PROGRAM**

This program is the same as that listed under Commercial/Industrial Large Sector section.

k. **DISTRIBUTED GENERATION PROGRAM**

This program is the same as that listed under Commercial/Industrial Large Sector section.

l. **CRITICAL PEAK REBATE (CPR) RATE**

This program is the same as that listed under Residential Sector section.

### **3.4. Commercial/Industrial Large Sector (as defined by EDC Tariff) Programs**

#### **a. COMMERCIAL AND INDUSTRIAL DRIVES PROGRAM**

##### **Years during which program will be implemented**

January 2010 through May 2013

##### **Objective(s)**

The program encourages small and large, commercial and industrial, and governmental/non-profit customers to improve motor efficiency by applying variable frequency drives on specific loads that have variable torque requirements, such as fans and pumps.

##### **Target market**

The program will be targeted to large commercial and industrial customers that utilize fans and pumps to control fluid or air flow in specific processes or pumping schemes. Since greater energy savings may be realized from larger motor applications, this program will focus on motors between 25 – 200 hp. Applications of variable frequency drives for motors exceeding 200 hp are eligible for incentive through the Custom Applications Program. Based on market studies of electric motors, Allegheny Power estimates that there are approximately 18,800 motors in Allegheny Power's Pennsylvania service territory rated between 25 hp and 200 hp. Of that number, it is estimated 1% to 1.5% are applied on pumps/fans with a conventional motor drive that could be economically upgraded to a variable frequency drive.

##### **Program description**

The application of a variable frequency drive will enhance the performance of the driven equipment using speed control, instead of the existing mechanical means (vane, throttling valves, etc.). These types of variable torque loads offer the best energy savings return with the application of a variable frequency drive. Other benefits realized from the use of variable frequency drives include less maintenance on mechanical parts, and ability to provide much finer speed control of the motor.

This program will be offered to industrial, manufacturing, water treatment, and commercial customers that have motor-driven fan and pump applications that presently utilize mechanical vanes or throttling valves to control fluid flow. According to the EPRI ASD Master User's Guide, the following applications can provide fair to good savings results.

- Adjustable Speed Drive (ASD) Application – Centrifugal Fans, Pumps, Compressors, Blowers
- Load Duty Cycle – Full range of operation from 20 – 100% of rated load
- Motor Size – Above 30 hp
- Annual Operating Hours – Over 2500 hours

The rebate strategy will be to provide 50% of the drive's cost. The rebate will be limited to the retrofit of an existing motor that drives a variable torque load the "fits" into the application criteria described above.

New installations of drives for motors and maintenance or replacement of existing failed drive components are not included in the program.

**Implementation strategy (including expected changes that may occur in different program years)**

The program will use an "upstream" delivery method by enlisting industrial electrical distributors to help with education, drive application, and incentive payment activities. All electrical distributors that supply variable frequency drives in Allegheny Power's Pennsylvania service territory, plus other areas, will be trained on the details of AP's program. When an Allegheny Power customer contacts an electrical distributor concerning purchasing a drive, the distributor would inform him of Allegheny Power's program, assist with the application, and verify that the application meets Allegheny Power's requirements for an incentive payment. If a customer uses an electrical distributor that is outside of Allegheny Power's service area, then the distributor can be informed the rebate incentive and become part of Allegheny Power's program by simply contacting the Program Administrator.

To be eligible for this program, the application of the drive must meet the requirements as stated in the program description. Installations of variable frequency drives in new construction or replacement of a failed variable speed drive for an existing application are not eligible.

**Program issues and risks and risk management strategy**

The current economic downturn may also be a risk to program success. To overcome this factor, Allegheny Power will bring to bear the resources available through Allegheny Power and state agencies, possible tax credits as well as emphasize potential energy and maintenance savings. An additional risk is that programs may not be approved in time to align with commercial and industrial customers' budget cycles for 2010. Possible mitigation strategies include:

- Request phased review and approvals for those programs at risk due to budget planning cycles; and
- Consider contacting eligible customers in advance of approvals to alert them of a possible program.

Achieving estimated participation rates is a program risk. The program will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy;
- Modify incentives; and
- Modify or eliminate measures being offered.

### Anticipated costs to participating customers

Allegheny Power will be providing a capital incentive of up to 50% of the variable speed drive's cost. The customer will be responsible for the remaining capital, plus the installation costs of the equipment.

### Ramp up strategy

Allegheny Power will begin communicating program in the fourth quarter of 2009 so Commercial and Industrial customers can plan and budget for 2010 projects in 2009. This program is expected to be 'full launched' that is, offered to the entire target population on the launch date. Allegheny Power will execute the launch in this manner since it will have had some experience in program management in another state prior to the Pennsylvania launch. It is assumed that the ramp up period for this program will occur in the 2009 and 2010 plan years. In the 2009 plan year, the participation rates are projected to be 33% of future year levels. In the 2010 plan year, the participation rates are projected to be 50% of future year levels.

### Marketing strategy

Marketing activities will target eligible customers to inform them of the program, its components, and the associated benefits through bill inserts, direct mail, Allegheny Power website, trade shows, the business customer newsletter, and key account managers. Electrical distributors will also be trained on the program and able to market it to customers.

Marketing activities will include leveraging and promoting federal and state funding opportunities (stimulus dollars, tax incentives, grants, etc.) that may be associated with this program.<sup>81</sup>

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

Eligible Program Measures & Incentives		
MEASURE	REBATE (\$)	REBATE LEVEL (%)
Commercial and Industrial Drives Program	50% of VFD Cost	

### Program start date with key schedule milestones

The proposed implementation and roll out strategy is:

#### 2009

August to September

Develop process, online forms, web pages, contact potential wholesale electrical distributors for participation

<sup>81</sup> Reference Additional Funding Table in Section 10.F.2.



August to November	Establish and train wholesale distributors on program.
November to December	Market program to customers via direct mail, and assigned accounts
<b>2010</b>	
January	Program kick off

**Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 2 EM&V category.<sup>82</sup>

It is assumed that most changes and/or improvements to processes and applications resulting in energy efficiency improvements will require system level spot or short-term measurements. Because of the overall size of the customer's usage in industrial/commercial facilities, utility billing records may not provide discrete results to verify the improvement in energy efficiency. Depending on type of process of application that is being modified, baseline measurements may also be required to determine existing loading, usage, or time of operation levels. If the customer uses the energy savings to fund the project, before and after type measurement will be required as a part of a contract with and Energy Service Company (ESCO). These evaluations would be considered in the application of all measures.

Among other things, data relative to the number of participants, the saturation within the Allegheny Power Pennsylvania service territory and the energy savings will be maintained in the database.

Analysis of data collected will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that changes are warranted in this program. The program will be evaluated to determine overall cost-effectiveness, participation rates, and levels of achieved energy and demand savings. Allegheny Power may consider program modifications or improvements, and will notify the Commission if it appears that changes were warranted in this program. Reports will be prepared and maintained by the third-party administrator to verify adherence to customer eligibility requirements.

**Administrative requirements – include utility staffing levels**

This program will be managed and administered by Allegheny Power. The electrical distributor will provide equipment application and fulfillment, and the requested reimbursements will be handled by a rebate fulfillment center. Based on the contract administration, and utility accounting needs, Allegheny Power estimates 0.5 FTE will be required to administer the program.

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<sup>82</sup> Reference Section 6.1.2. for details of Level 2 EM&V.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	18,800	24	24
<b>2010</b>	18,800	141	141
<b>2011</b>	18,800	282	282
<b>2012</b>	18,800	282	282

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$331,059	\$5,000	\$29	\$7,855	\$73,438	<b>\$417,381</b>
<b>2010</b>	\$172,520	\$12,360	\$173	\$49,378	\$440,625	<b>\$675,057</b>
<b>2011</b>	\$176,433	\$12,731	\$346	\$45,410	\$812,733	<b>\$1,047,654</b>
<b>2012</b>	\$180,435	\$7,649	\$346	\$40,931	\$812,733	<b>\$1,042,094</b>
<b>TOTAL</b>	<b>\$860,448</b>	<b>\$37,740</b>	<b>\$895</b>	<b>\$143,574</b>	<b>\$2,139,528</b>	<b>\$3,182,185</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	399	399	0.1	0.1
<b>2010</b>	2,393	2,792	0.5	0.6
<b>2011</b>	4,786	7,578	0.9	1.5
<b>2012</b>	4,786	12,364	0.9	2.4

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 1.2

Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

**b. CUSTOM APPLICATION PROGRAM****Years during which program will be implemented**

January 2010 through May 2013

**Objective(s)**

The program encourages energy and demand reductions with large commercial and industrial customers. The program will focus on improving the energy efficiency for specific process and applications, such as: lighting systems,<sup>83</sup> compressed air, chillers, refrigeration, variable speed drives,<sup>84</sup> motors, energy management systems, fan and pump systems, and combined heat-power systems.

**Target market**

The program will be targeted at approximately 550 large commercial and industrial customers in the Allegheny Power's Pennsylvania service territory, with usage of at least 2.5 million kWhs per year.

**Program description**

The program provides up to \$10,000 for a targeted energy audit.<sup>85</sup> To further entice the customer to complete the physical installation of the energy saving measure(s) as recommended by the targeted energy audit, Allegheny Power will provide a capital contribution incentive of up to 50% of the customer's project cost, with a per project cap of \$500,000. The maximum award expenditure for Allegheny Power under the program will be as follows:

- 2010: \$1,500,000
- 2011: \$2,000,000
- 2012: \$2,000,000

Projects will be awarded based on kWh savings.

There are no specific limitations for eligible measures, other than that they must be electro-technology based. The following measures are the most commonly applied in industrial/commercial facilities:

- Lighting systems
- Compressed air
- Chillers
- Refrigeration
- Variable speed drives
- Motors
- Energy management systems

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<sup>83</sup> For applications beyond Commercial Lighting Program.

<sup>84</sup> For applications beyond Commercial and Industrial Drives Program.

<sup>85</sup> Targeted energy audits focus on specific commercial and industrial processes and related equipment.

- Fan/pumps systems
- Combined heat-power systems.

Individual measures eligible for the custom program were not evaluated to estimate program savings. Rather, the program was evaluated at the customer level to estimate savings and it is assumed that each participating customer has the potential for a 10% reduction in energy usage.

**Implementation strategy (including expected changes that may occur in different program years)**

Allegheny Power will contract with an energy services company experienced in performing comprehensive large commercial and industrial audits to provide audits and energy usage studies.

Allegheny Power will review the proposals and use a selective evaluation process to maximize the energy savings investment under the program. Allegheny Power will screen the projects based on, but not limited to, a TRC test to determine which projects and/or sub-measures are cost effective. Allegheny Power will then use a ranking methodology and financial analyses to determine which projects provide the best energy savings return on investment. To verify which projects are technically viable, Allegheny Power will rely on auditing partners to perform the energy audits and studies on the selected projects. The project review process will be iterative until the targeted MWhr reductions are reached or the yearly capital incentive cap has been reached.

**Program issues and risks and risk management strategy**

A significant risk to the program success is customers' access to capital to finance energy efficiency and conservation programs. With the capital incentive, or up to 50% of the project cost, we believe that these projects will be very attractive due to the short payback period plus the reduction in operating costs because of the lower energy usage.

The program will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Increase and/or modify marketing strategy;
- Increase award structures if TRC test and EE&C Plan budget justify; and
- Eliminate the program.

An additional risk is that programs may not be approved in time to align with commercial and industrial customers' budget cycles for 2010. Possible mitigation strategies include:

- Request phased review and approvals for those programs at risk due to budget planning cycles.
- Consider contacting eligible customers in advance of approvals to alert them of a possible program.

### **Anticipated costs to participating customers**

Allegheny Power will provide a large capital incentive, up to 50% of the project cost with a per project cap of \$500,000, so that customer will implement an energy savings project. The customer will have to provide the remaining capital to install the project.

### **Ramp up strategy**

As shown by the incentive strategy above, the program will be more heavily weighted with incentives in the early years to attract end-users with larger projects that will capture larger energy savings opportunities. Given the nature of capital budgeting cycles, Allegheny Power expects that it will also take several budgeting cycles to get these projects into the customer's capital construction budgets. All customers will be eligible to participate in the program in each year of the Plan.<sup>86</sup>

### **Marketing strategy**

This program will be offered directly to a customer by soliciting proposals that will provide energy and demand savings by improving specific electrical processes or applications.

Marketing activities will include leveraging and promoting federal and state funding opportunities (stimulus dollars, tax incentives, grants, etc.) that may be associated with this program.<sup>87</sup>

Allegheny Power will begin marketing the program late in 2009 by contacting the top industrial customers by usage.<sup>88</sup> Allegheny Power's Account Management staff and direct mail information will be used to contact these commercial and industrial customers.

### **Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels**

<b>Eligible Program Measures &amp; Incentives</b>		
<b>MEASURE</b>	<b>REBATE (\$)</b>	<b>REBATE LEVEL (%)</b>
Commercial & Industrial Custom Applications Program	50% up to \$500,000	

### **Program start date with key schedule milestones**

Allegheny Power will determine and measure key milestones achieved as referenced in program participation levels and savings tables for respective years.

<sup>86</sup> Customers may participate in multiple years if their proposals are accepted based on screening criteria.

<sup>87</sup> Reference Additional Funding Table in Section 10.F.2.

<sup>88</sup> Top 180 electric usage customers are expected to provide the greatest opportunity for savings and therefore are targeted first.

- Program Marketing: Begin discussions with key customers early 4<sup>th</sup> quarter 2009 so that projects can be added to customers' 2010 budget.<sup>89</sup>
- Program Start Date: January 1, 2010
- Project Proposals Awarded: December of each year
- Program End Date: May 31, 2013<sup>90</sup>

**Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 2 EM&V category.<sup>91</sup>

It is assumed that most changes and/or improvements to processes and applications resulting in energy efficiency improvements will require system level spot or short-term measurements. Because of the overall size of the customer's usage in industrial/commercial facilities, utility billing records may not provide discrete results to verify the improvement in energy efficiency. Depending on type of process of application that is being modified, baseline measurements may also be required to determine existing loading, usage, or time of operation levels. If the customer uses the energy savings to fund the project, before and after type measurement will be required as a part of a contract with an Energy Service Company (ESCO). These evaluations would be considered in the application of all measures.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

**Administrative requirements – include utility staffing levels**

This program would be managed and administered by Allegheny Power. Based on the evaluation process, contract administration, and utility accounting needs, Allegheny Power estimates 0.5 FTE will be required to administer the program. Allegheny's Account Management staff will be also be utilized to support the program.

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<sup>89</sup> Discussions with customers are expected to begin prior to plan approval, but with caveat that program is contingent upon PUC approval of EEC and DR Plan.

<sup>90</sup> All projects accepted must be completed by May 31, 2013. This assumes Plan will end May 31, 2013.

<sup>91</sup> Reference Section 6.1.2. for details of Level 2 EM&V.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	550	0	0
<b>2010</b>	550	5	5
<b>2011</b>	550	8	8
<b>2012</b>	550	8	8

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$326,547	\$5,000	\$8,976	\$0	\$0	<b>\$340,523</b>
<b>2010</b>	\$157,139	\$12,360	\$98,936	\$25,718	\$1,250,000	<b>\$1,544,153</b>
<b>2011</b>	\$160,703	\$12,731	\$152,912	\$29,070	\$1,844,500	<b>\$2,199,917</b>
<b>2012</b>	\$164,348	\$7,649	\$152,912	\$26,657	\$1,844,500	<b>\$2,196,067</b>
<b>TOTAL</b>	<b>\$808,738</b>	<b>\$37,740</b>	<b>\$413,736</b>	<b>\$81,446</b>	<b>\$4,939,000</b>	<b>\$6,280,660</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	0	0	0.0	0.0
<b>2010</b>	18,522	18,522	3.6	3.6
<b>2011</b>	29,635	48,157	5.8	9.5
<b>2012</b>	11,958	60,115	2.3	11.8

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated TBD.

Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

**c. CUSTOMER LOAD RESPONSE PROGRAM****Years during which program will be implemented**

January 2011 through May, 2013

**Objective(s)**

The program is focused on reducing demand in the small and large, commercial and industrial, and governmental/non-profit customer sectors. Under this program, Allegheny Power will contract with customers to implement load curtailments during peak load periods. By controlling the demand for energy during the peak periods, load resources can become an integral part of managing the overall supply of energy to the system. A customer who participates in capacity and/or energy markets will also realize savings in the form of reduced capacity and energy costs.

**Target market**

The program will initially target small and large, commercial and industrial, and governmental/non-profit customers in the Allegheny Power Pennsylvania service territory, with demand of at least 300 kW or greater. This program will be expanded to other small commercial and industrial, and governmental/non-profit customers in conjunction with implementation of Smart Metering infrastructure.

**Program description**

Allegheny Power will assist customers by providing load management services by actively educating and providing assistance with the transition to market prices, load shaping and participation in PJM energy and capacity markets. Contracting with customers for load reduction as well as assisting customers with entry into the real time energy markets will help control the demand during peak hours. A customer who participates in this program will receive incentives based on their actual hourly load reduction from their calculated baseline during events called by Allegheny for the top 100 hours of load. Customers will have flexibility in selecting how many hours that they can participate with 50 hours being typical. Since Allegheny Power is also functioning as a "curtailment service provider" in the PJM Load Management Programs, customers will receive additional benefits by having Allegheny Power bid their load resources into the PJM load response programs. Allegheny Power plans to leverage available PJM programs to provide benefits to participants and limiting program expenses recovered through the EE&C surcharge. See Appendix F.5 for additional information.

**Implementation Strategy**

Allegheny Power will provide all technical assistance, project management and marketing activities to support the program. Allegheny Power will also be responsible for all marketing materials, contract preparation, load curtailment, and reconciliation services. Allegheny is already registered as a curtailment service provider under the PJM Load Management Programs. As part of this program, Allegheny Power (directly or through contracted services) will develop the necessary online user tools for customers:



customer signup, download data for load profiling or historical energy usage, model load modification schemes and review load curtailment events.

Allegheny Power has employed a Conservation Service Provider (CSP) to perform a market assessment of the demand response potential in Allegheny Power's commercial, industrial and government customer base. This study will focus on identifying a controllable load reduction and assigning confidence levels. As part of this study, the vendor will review the impact of the discontinuation of the PJM Interruptible Load Response program in 2012.

### **Program issues and risks and risk management strategy**

Customer participation rates and effectively dispatched demand response events will drive the results of the program. The use of real time or advanced metering will also influence the results of the program. Allegheny Power will leverage this technology in order to improve the performance of customers during the dispatched events.

The recent PJM Base Residual Auction for 2012/2013 also introduces a hurdle in that the value of capacity in the Allegheny Power zone cleared at approximately 10% of the net cost of new entry. In the past, participating customers have realized tremendous value in PJM's Interruptible Load Response (ILR) programs without having to frequently reduce load. Customers making the transition to Allegheny Power's Demand Response (DR) program for delivery year 2012/2013 will be required to control load over numerous events, and up to 100 hours per year. Customer fatigue and dropout will be closely managed.

### **Anticipated costs to participating customers**

Prior to the installation of Smart Metering Infrastructure, Allegheny Power will provide interval metering data via our Energy Data Services ("EDS") at no cost to any customer whose load is participating in this program. Interval data through EDS can be provided monthly or daily in an excel spreadsheet format. For EDS daily data, the data file is made available the next day.

Until Allegheny Power's smart metering infrastructure is deployed and functional at the customer's facility, Allegheny will target customers with a demand greater than 300 kW who have interval metering to participate in this demand response program. In cases where customer request the installation of a KYZ pulse contact, the customer cost for the installation of this additional equipment is \$650 (\$500 for KYZ pulse installation, \$150 for time synchronization).

### **Ramp up strategy**

Account Managers and Business Account Specialists will roll-out the program using direct contacts with eligible customers in 4<sup>th</sup> Quarter2010.

### **Marketing strategy**

The customers will be targeted several ways:

Assigned accounts: Account Managers proactively handle approximately 130 of the top energy users that would be eligible for the program. They will personally contact their assigned customers to educate them about this program and the companion Customer Resources Demand Response Program that will be administered by 3<sup>rd</sup> party PJM Curtailment Service Providers. We will follow up with a direct mail piece to encourage participation and provide more program details, inclusive of both this program and the companion Customer Resources Demand Response Program, and provide information on PJM Curtailment Service Providers who provide load curtailment services.

Non-assigned accounts: These accounts are managed by Business Account Specialists in Allegheny's call center. Direct mail will be sent to these customers with program details and contact information. The direct mail information will include information on both this program and the Customer Resources Demand Response Program that will be administered by 3<sup>rd</sup> party PJM Curtailment Service Providers who provide load curtailment services.

As a follow up to both audiences, an email will be sent to reinforce the program details, inclusive of both this program and the Customer Resources Demand Response Program. A link to Allegheny's web site will allow customers to access more program details and information.

Sales/marketing/educational materials will be developed for the Account Managers and Business Account Specialists to provide to customers, which will include details on all curtailment type programs including the Customer Load Response, Customer Resources Demand Response and the Distributed Generation programs. All marketing materials will equally promote all demand response programs and encourage customers to select a PJM CSP who can best address their needs. The materials will also include a listing of PJM CSPs who provide load curtailment services.

Allegheny Power also plans to host an annual seminar and invite customers, PJM CSPs and stakeholders to participate. The seminar will focus on providing customers with information on the Customer Load Response, Customer Resources Demand Response and Distributed Generation Programs. The PJM CSPs will be invited to present information and setup vendor tables. See Appendix F.5 for additional information.

### Eligible measures and incentive strategy

The customer incentive for this program will be based on the customer's actual measured load reduction from the customer's calculated Customer Baseline during called event periods and a customer incentive rate that will be established based on the results of the load nominations by PJM CSPs for the Customer Resources Demand Response Program (refer to Customer Resources Demand Response Program). Allegheny will calculate the customer incentive rate on a \$\$ per MWhr basis based on the weighted average of all contracted load nominations for the Customer Resources Demand Response Program, reduced by an Allegheny Power administration adjustment to account for the differences in program administration between this program and the Customer Resources Demand Response Program. See Appendices F.5, F.6 and F.7 for additional information.

Eligible Program Measures & Incentives		
MEASURE	REBATE (\$)	REBATE LEVEL (%)
Customer Load Response Program	\$/MWhr based on weighted average of nominations by PJM CSPs under Customer Resources Demand Response Program less administration adjustment	

### Program start date with key schedule milestones

- Complete 2011 Market Assessment Study: Fourth quarter 2010
- Complete 2012 Market Assessment Study: Fourth quarter 2011
- Program Marketing: Fourth quarter 2010
- Program Start Date: January 1, 2011
- Program End Date: May 31, 2013<sup>92</sup>

### Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant

This program falls into the Level 2 EM&V category.<sup>93</sup>

It is expected that the smart metering infrastructure will provide the method for EM&V of this rate.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

<sup>92</sup> All projects accepted must be completed by May 31, 2013. This assumes Plan will end May 31, 2013.

<sup>93</sup> Reference Section 6.1.2. for details of Level 2 EM&V.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

**Administrative requirements – include utility staffing levels**

This program would be managed and administered by Allegheny Power. Based on the customer education and assistance requirements, contract administration, and utility accounting needs, Allegheny Power estimates 3.0 FTEs will be required to administer the program. The following provides the administration requirements to support the program.

Program Manager - 0.75 FTE's

The program manager will handle contract administration, provide program over-site and monitoring, complete financial and program reporting, and event reconciliation, and develop marketing activities, training and educational materials.

Account Manager/Business Account Specialists – 1.5 FTE's

The Account Manager/Business Account Specialist provides marketing, customer education, enrollment and training, and handles other program related customer service activities.

Technician - 0.75 FTE's

The technician will enroll customer load in the PJM markets, perform event reconciliation calculations, and support all program reporting requirements.

See Appendices F.5 and F.8 for additional information.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	0	0	0
<b>2010</b>	3,000	30	30
<b>2011</b>	3,000	58	58
<b>2012</b>	3,000	58	58

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$257,667	\$0	\$0	\$0	\$0	<b>\$257,667</b>
<b>2010</b>	\$330,615	\$6,035	\$0	\$0	\$18,750	<b>\$355,400</b>
<b>2011</b>	\$345,365	\$6,035	\$0	\$17,500	\$200,589	<b>\$569,489</b>
<b>2012</b>	\$353,034	\$0	\$0	\$35,000	\$913,765	<b>\$1,301,799</b>
<b>TOTAL</b>	<b>\$1,286,681</b>	<b>\$12,070</b>	<b>\$0</b>	<b>\$52,500</b>	<b>\$1,133,105</b>	<b>\$2,484,356</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	0	0	0.0	0.0
<b>2010</b>	750	750	15.0	15.0
<b>2011</b>	1,450	1,450	29.0	29.0
<b>2012</b>	2,900	2,900	29.0	29.0

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 1.3  
Refer to Table 7A for TRC for each program year.

#### **Other information deemed appropriate**

Allegheny Power has employed a Conservation Service Provider (CSP) to perform a market assessment of the demand response potential in Allegheny Power's commercial, industrial and government customer base. The results of this study may impact the participation, budget and savings targets projected for this program.

**d. CUSTOMER RESOURCES DEMAND RESPONSE PROGRAM****Years during which program will be implemented**

January 2011 through May 2013

**Objective(s)**

The program is focused on reducing demand in the small and large, commercial and industrial, and governmental/non-profit customer sectors, by deploying customer load resources from load curtailment strategies provided by PJM Curtailment Service Providers or Customer Curtailment Service Providers (CSPs). Allegheny Power will contract with one or more PJM CSPs who will develop a portfolio of callable load response resources that will be dispatched for demand response activities during Allegheny Power's 100 hours of highest demand. The PJM CSP customers will have flexibility in selecting how many hours that they can participate, based on their contract with their CSP. Contracted load resources provide a multitude of utility and customer benefits, including: reduces peak demand, and improved grid reliability.

**Target market**

Contracts for load resources will be initially targeted at existing small and large, commercial and industrial, and governmental/non-profit customers with a demand of at least 300 kW or greater. The program will be expanded to customers less than 300 kW in conjunction with the deployment of smart metering infrastructure that will provide the required metering and communications network for these customers to participate. PJM CSPs may also enroll customers with a demand less than 300 kW where a measurement and verification protocol is approved by Allegheny Power in advance of program enrollment.

**Program description**

Under the program, PJM CSPs will provide services to register and dispatch customer curtailable load during targeted hours of Allegheny Power's 100 hours of highest demand. Allegheny Power will contract with PJM CSPs to deliver an amount of curtailable load. The PJM CSPs will structure individual contracts with customers to respond to curtailment event notices issued by Allegheny Power to the customer's CSP. PJM CSPs and customers will have flexibility in selecting how many hours that they can participate with 50 hours being typical.

Allegheny Power will pay the PJM CSPs based on the actual load reduction that occurred during the curtailment events, based on the contracted rate established through the nomination process. A customer who participates in this program will be provided an incentive by their CSP according to the CSP's contract with the customer for each hour the customer's load is dispatched under this program. All payments to the customer will be from the customer's CSP. In order for the customer to realize the maximum benefits from participating in Allegheny Power's demand response programs, the customer's CSP must also register the customer's load in the available PJM load response programs. The customer can choose any registered CSP and Allegheny will provide potential customers

with a list of the PJM CSPs that can register their load in the PJM markets. To assist with marketing and customer recruitment, Allegheny will provide a list of the customers that are eligible for this program to PJM CSPs.

The wholesale electricity market prices vary each hour as the supply and demand of energy changes. By controlling the demand for electricity during the highest demand periods, customer load resources can become an integral part of managing the overall delivery of energy on the system. In addition to the incentives paid under this program, a customer who participates in load management activities by curtailing load can also realize savings in the form of reduced capacity and energy costs. See Appendix F.5 for additional information.

### **Program Issues and Risks and Risk Management Strategy**

The PJM Base Residual Auction for 2012/2013 introduces a hurdle in that the value of the capacity in Allegheny Power's zone cleared at approximately 10% of the new cost of new entry. In the past, participating customers have realized substantial value in PJM's Interruptible Load Response (ILR) programs without having to frequently reduce load. Customers making the transition to Allegheny Power's demand response programs will be required to control load over numerous events, and up to 100 hours per year. Customer fatigue and dropout will be closely managed.

### **Implementation strategy**

Allegheny Power believes that it will be difficult to obtain customer interest in a callable demand response program that requires customers to participate for up to 100 hours. To mitigate customer impact and fatigue, CSPs will be responsible to manage their customer portfolios to deliver the contracted load resources to provide the contracted MWhr reduction during Allegheny's 100 hours of highest demand.

Each program year, Allegheny Power will solicit nominations from Curtailment Service Providers who are in good standing with PJM for the customer load resources to fulfill Allegheny Power's program requirements from the small and large, commercial and industrial, and governmental/non-profit customer sectors. Existing Curtailment Service Providers that have Allegheny Power customer load resources under contract in our Pennsylvania service territory can contract those resources to respond to Allegheny Power's callable demand response events that will contribute to meeting the demand reduction goals for Allegheny Power. All nominations into the program will be evaluated based on customer sector, nominated load and price (based on \$\$ per MWhr). Allegheny Power will contract with the PJM CSPs for the amount of load resources to fulfill Allegheny Power's program requirements. See Appendix F.5 for additional information.

### **Anticipated costs to participating customers**

Prior to the installation of Smart Metering Infrastructure, Allegheny Power will provide interval metering data via our Energy Data Services ("EDS") at no cost to any customer whose load is participating in this program. Interval data through EDS can be provided

monthly or daily in an excel spreadsheet format. For EDS daily data, the data file is made available the next day.

Until Allegheny Power's smart metering infrastructure is deployed and functional at the customer's facility, Allegheny will target customers with a demand greater than 300 kW who have interval metering to participate in this demand response program. In cases where PJM Curtailment Service Provider's request the installation of a KYZ pulse contact for use with the Curtailment Service Provider's telemetry system, the customer cost for the installation of this additional equipment is \$650 (\$500 for KYZ pulse installation, \$150 for time synchronization).

### **Ramp up strategy**

In order for customers to become accustomed to performing in callable demand response events and for Allegheny Power to assess program performance, Allegheny Power will contract for approximately 40 MW for the 2011/2012 delivery year. This will allow for customer recruitment activities and to assess performance of Allegheny Power's EE&C and DR Plan in order to establish the final program parameters and targets for the 2012/2013 delivery year. At the end of each program delivery year, Allegheny Power will issue a forecast for the contracted load that is projected for the 2012/2013 delivery year.

### **Marketing strategy**

For load resources that will be contracted from Curtailment Service Providers, we anticipate some marketing efforts from the Curtailment Service Provider's because they have contracts with customers who are currently participating in the PJM load response programs. Allegheny will also provide a list of eligible customers to the contracted PJM CSPs for their use in direct marketing to attract additional or new customers. The customer list will provide sufficient data for CSPs to initiate customer contact and marketing activities.

Account Managers and Business Account Specialists will provide customers with information on the Customer Resources Demand Response Program. To attract new load resources into the Customer Resources Demand Response Program, Allegheny will develop sales/marketing/educational materials and will assist the PJM CSPs with recruiting potential customers. The materials will provide details on all curtailment type programs including the Customer Load Response, Customer Resources Demand Response and the Distributed Generation Programs. All marketing materials will equally promote all demand response programs and will encourage customers to select a PJM CSP who can best address their needs. The materials will also include a listing of PJM CSPs who provide load curtailment services.

Allegheny Power also plans to host an annual seminar and invite customers, PJM CSPs and stakeholders to participate. The seminar will focus on providing customers with



information for the Customer Load Response, Customer Resources Demand Response and Distributed Generation Programs. The PJM CSP(s) will be invited to present information and setup vendor tables. See Appendices F.5 and F.8 for additional information.

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

All incentives paid by Allegheny Power under this program will be made to the PJM CSPs. Allegheny Power's payment to the PJM CSPs for load curtailment will be based on the actual measured load reduction from the customer baseline for each hour of the load curtailment event. A customer who participates in this program will be provided an incentive by their CSP according to the CSP's contract with the customer for each hour the customer's load is dispatched under this program.

PJM CSPs contracted under this program will be subject to an under performance penalty of 150% for hourly shortfalls relative to the contracted load reduction. For example: If a CSP nominates 1,000 MWhrs at \$400/MWhr into the program and only delivers 950 MWhrs, the penalty will be 50 MWhrs x \$400/MWhr x 1.5

PJM CSPs will also be rewarded for over-performance relative to the contracted load reduction and nominated rate. The maximum contract over-performance will be capped at 10% of the total contract. See Appendices F.5 and F.6 for additional information.

<b>Eligible Program Measures &amp; Incentives</b>		
<b>MEASURE</b>	<b>REBATE (\$)</b>	<b>REBATE LEVEL (%)</b>
Customer Resources Demand Response	Per CSP Contract	

**Program start date with key schedule milestones**

- Program Marketing: Fourth Quarter 2010
- Program Start Date: January 1, 2011
- Program End Date: May 31, 2013<sup>94</sup>

**Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 2 EM&V category.<sup>95</sup>

It is expected that the existing interval metering and smart metering infrastructure that will be installed will provide the method for EM&V of this program.

<sup>94</sup> All projects accepted must be completed by May 31, 2013. This assumes Plan will end May 31, 2013.

<sup>95</sup> Reference Section 6.1.2. for details of Level 2 EM&V.

As our Smart Metering Technology Procurement and Installation Plan is implemented, new user tools will be developed for customers to retrieve and review energy usage data to aid their participation in the Company's programs. These tools will be made available to all Allegheny Power customers.

TRC analysis of the program will occur annually during the annual review process to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

**Administrative requirements – include utility staffing levels**

This program will be completely managed and administered by Allegheny Power and Curtailment Service Provider's will manage the program with their participating customers. Based on the evaluation process, contract administration, and utility accounting needs, Allegheny Power estimates 1.5 FTE's will be required to administer and support the program as follows:

Program Manager - 0.5 FTE's

The Program Manager will conduct the annual RFP process, handle contract administration and contacts with the PJM CSPs, provide program over-site and monitoring, complete financial and program reporting, and event reconciliation, and develop marketing activities, training and educational materials in coordination with the contracted PJM CSPs.

Account Manager/Business Account Specialist - 0.75 FTE's

The Account Manager/Business Account Specialist will provide marketing, customer education and training, assist CSPs with customer recruitment and joint customer visits, and support other program related customer service activities.

Technician – 0.25 FTE's

The technician will perform event reconciliation calculations and support program reporting. See Appendices F.5 and F.8 for additional information.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	0	0	0
<b>2010</b>	3,000	50	50
<b>2011</b>	3,000	80	80
<b>2012</b>	3,000	80	80

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$257,667	\$0	\$0	\$0	\$0	<b>\$257,667</b>
<b>2010</b>	\$163,336	\$6,035	\$0	\$0	\$93,750	<b>\$263,121</b>
<b>2011</b>	\$177,041	\$6,035	\$0	\$17,500	\$368,900	<b>\$569,476</b>
<b>2012</b>	\$180,830	\$0	\$0	\$35,000	\$1,475,600	<b>\$1,691,430</b>
<b>TOTAL</b>	<b>\$778,873</b>	<b>\$12,070</b>	<b>\$0</b>	<b>\$52,500</b>	<b>\$1,938,250</b>	<b>\$2,781,693</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	0	0	0.0	0.0
<b>2010</b>	1,250	1,250	25.0	25.0
<b>2011</b>	2,000	2,000	40.0	40.0
<b>2012</b>	4,000	4,000	40.0	40.0

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 1.7  
Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

**e, DISTRIBUTED GENERATION PROGRAM****Years during which program will be implemented**

January 2011 through May 2013

**Objective(s)**

The program is focused on reducing demand in the small and large, commercial and industrial, and governmental/non-profit customer sectors, by deploying customer “non-utility” generation resources. Allegheny Power will contract with a “distributed generation (DG) Manager” to “harvest” existing installed standby generation capacity. This entity would develop a portfolio of standby generation resources to be dispatched for demand response activities and to provide standby generation service for unplanned utility outages or other customer maintenance activities. Distributed generation technologies provide a multitude of utility and customer benefits, including: reduces peak demand, improved grid reliability and provides standby power service. In addition, Allegheny will explore the use of alternative fuels such as bio-diesel, or waste methane/landfill gas for these generators. Allegheny will ensure all permitting requirements are adhered to for generators enrolled in this program.

**Target market**

The program will be initially targeted at existing small and large, commercial and industrial, and governmental/non-profit customers that have a facility demand and have generators rated larger than 300 kW.

**Program description**

Under the program, customers will contract with a DG Manager to provide the customer with operation and maintenance services on the customer’s generator. The DG Manager will dispatch the generator up to 100 hours in response to curtailment event notices issued by Allegheny Power during the targeted hours of Allegheny Power’s 100 hours of highest demand. A customer who participates in this program will be provided an incentive on a \$\$/MWhr basis for each hour that their generator is dispatched to target Allegheny Power’s hours of highest demand.

In order for the customer to realize the maximum benefits from participating in Allegheny Power’s demand response programs, the customer’s Curtailment Service Provider (CSP) must also register the customer’s load in the PJM load response programs. The customer can choose any registered CSP and Allegheny will provide potential customers with a list of the PJM CSPs that can register their load in the PJM markets. To assist with marketing and customer recruitment, Allegheny will provide a list of the potential customer generators to PJM CSPs.

Many electric customers own and maintain backup standby generators in order to meet the requirements of Section 701 of the National Electrical Code for “Legally Required Standby Systems” or Section 702 for “Optional Standby System.” In Allegheny Power’s Pennsylvania service territory, there is approximately 70 MW of existing standby generation larger than 300 kW. These sources are primarily in hospitals, banking, data center and high tech manufacturing facilities, and the generators range in size up to 2000 kW. This “non-utility” distributed generation fleet does not include co-generation facilities since these units are normally operated in parallel with the grid and are part of a combined heat/power scheme where the generation could not be readily changed to meet a peak demand situation.

The wholesale electricity market prices vary each hour as the supply and demand of energy changes. By controlling the demand for electricity during the highest demand periods, customer standby generation resources can become an integral part of managing the overall delivery of energy on the system. Distributed generation resources are uniquely situated to manage system loads since they are capable of performing at will and minimize the customer impacts associated with other demand response programs. In addition to the incentives paid under this program, a customer who participates in load management activities by utilizing standby generation can also realize savings in the form of reduced capacity and energy costs. See Appendix F.5 for additional information.

### **Program Issues and Risks and Risk Management Strategy**

Allegheny Power anticipates a mixed response from various entities regarding the use of standby generation as a resource for demand response. As part of the program, alternative fuel sources such as bio-diesel, and methane gas, will be explored as a potential fuel source. We also believe that distributed generation is a suitable resource for demand response because of the following:

- Limited hours of operation
- Alternative fuel sources will reduce emissions
- Emission control can be added to generators (selective catalytic reduction) for NO<sub>x</sub>
- Local generation can save on transmission/distribution losses

### **Implementation strategy (including expected changes that may occur in different program years)**

Allegheny Power has customer data for existing customer owned standby generators that could be “harvested” for this program. The program can be easily marketed to these existing installations and will be the focus of the initial marketing efforts. The DG Manager will be responsible for providing all services to operate, maintain, fuel and dispatch the generators that are enrolled in this program. Allegheny Power will assist with initial and follow-up sales calls, in coordination with the DG Manager and customer selected PJM CSP. See Appendix F.5 for additional information.

**Anticipated costs to participating customers**

The third party DG Manager will contract directly with the customer to maintain and operate the customer's generator. The customer will pay the DG Manager for all operation and maintenance services provided by the DG Manager. The customer costs for these services will vary depending on the size and age of the generator.

Prior to the installation of Smart Metering Infrastructure, Allegheny Power will provide interval metering data via our Energy Data Services (EDS) at no cost to any customer or PJM CSP customer whose generator is participating in this program. Interval data through EDS can be provided monthly or daily in an excel spreadsheet format. For EDS daily data, the data file is made available the next day.

Until Allegheny Power's Smart Metering Infrastructure is deployed and functional at the customer's facility, Allegheny will target customers with a demand greater than 300 kW who have interval metering to participate in this demand response program. In cases where PJM CSPs request the installation of KYZ pulse contacts for use with the CSP's telemetry systems, the customer cost for the installation of this additional equipment is estimated to be \$650 (\$500 for KYZ pulse installation, \$150 for time synchronization).

**Ramp up strategy**

Allegheny Power will solicit RFP's and contract with a DG Manager who can support this program in the 4<sup>th</sup> quarter of 2010. The DG Manager will contract with the customer to maintain and operate the customer's generator under this program.

**Marketing strategy**

The program will be primarily marketed between the DG Manager and Allegheny Power's Customer Management group. Allegheny Power's Account Managers actively manage approximately 50% of the customers that the Company has identified who presently own standby generation that would be eligible for the program. Allegheny Power has identified approximately 80 customers with standby generators that could take advantage of this program. Since there is a select group of customers with standby generation, the Program Manager will market directly to these customers using direct mail or direct contact from an Account Manager or Business Account Specialist. To assist with marketing and customer recruitment, Allegheny will provide a list of the potential customer generators to PJM CSPs.

Allegheny will develop sales/marketing/educational materials and will assist the DG Manager and PJM CSPs with recruiting potential customers. The materials will provide details on all curtailment type programs including the Customer Load Response, Customer Resources Demand Response and the Distributed Generation Programs. All marketing materials will equally promote all demand response programs and will encourage customers to select a PJM CSP who can best address their needs. The materials will also include a listing of PJM CSPs who provide load curtailment services. See Appendices F.5 and F.8 for additional information.

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

<b>Eligible Program Measures &amp; Incentives</b>		
<b>MEASURE</b>	<b>REBATE (\$)</b>	<b>REBATE LEVEL (%)</b>
Distributed Generation Program	\$/MWhr based on weighted average of nominations by PJM CSPs under Customer Resources Demand Response Program	

The customer incentive for this program will be based on the customer's actual measured load reduction from the customer's calculated Customer Baseline during called event periods and a customer incentive rate that will be established based on the results of the load nominations by PJM CSPs for the Customer Resources Demand Response Program (refer to Customer Resources Demand Response Program). Allegheny will calculate the customer incentive rate on a \$\$ per MWhr basis based on the weighted average of all contracted load nominations for the Customer Resources Demand Response Program.

In order for the customer to realize the maximum benefits from participating in Allegheny Power's demand response programs, the customer's CSP must register the customer's load in the available PJM load response programs. The customer can choose any registered PJM CSP for this service. See Appendices F.5 and F.6 for additional information.

#### **Program start date with key schedule milestones**

- Program Marketing: Fourth Quarter 2010
- Program Start Date: January 1, 2011
- Program End Date: May 31, 2013

#### **Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 2 EM&V category.<sup>96</sup>

It is expected that the smart metering infrastructure will provide the method for EM&V of this rate.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

<sup>96</sup> Reference Section 6.1.2. for details of Level 2 EM&V.

**Administrative requirements – include utility staffing levels**

This program would be completely managed and administered by Allegheny Power. Based on the evaluation process, contract administration, and utility accounting needs, Allegheny Power estimates 0.5 FTE's will be required to administer the program, consisting of the following resources:

Program Manager – 0.25 FTE's

The Program Manager will conduct the RFP process and handle contract administration, provide program over-site and monitoring, complete financial and program reporting, and event reconciliation, and develop marketing activities, training and educational materials in coordination with the DG Manager.

Account Manager/Business Account Specialist – 0.25 FTE's

The Account Manager/Business Account Specialist will provide marketing, customer education, enrollment and training, assist the DG Manager and PJM CSPs with customer recruitment and joint customer visits, and support other program related customer service activities. See Appendices F.5 and F.8 for additional information.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	0	0	0
<b>2010</b>	78	4	4
<b>2011</b>	80	8	8
<b>2012</b>	82	8	8

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$51,533	\$0	\$0	\$0	\$0	<b>\$51,533</b>
<b>2010</b>	\$53,950	\$331	\$0	\$0	\$65,000	<b>\$119,281</b>
<b>2011</b>	\$55,174	\$331	\$0	\$8,750	\$104,906	<b>\$169,161</b>
<b>2012</b>	\$56,426	\$0	\$0	\$17,500	\$209,812	<b>\$283,737</b>
<b>TOTAL</b>	<b>\$217,083</b>	<b>\$662</b>	<b>\$0</b>	<b>\$26,250</b>	<b>\$379,718</b>	<b>\$623,713</b>



**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	0	0	0.0	0.0
<b>2010</b>	200	200	4.0	4.0
<b>2011</b>	350	350	7.0	7.0
<b>2012</b>	700	700	7.0	7.0

**Cost-effectiveness – include TRC for each program year and cumulative**

The cumulative TRC for this program is calculated to be 0.9

Refer to Table 7A for TRC for each program year.

**Other information deemed appropriate**

**f. COMMERCIAL HVAC EFFICIENCY PROGRAM**

This program is the same as that listed under Small Commercial and Industrial Sector section

**g. COMMERCIAL LIGHTING EFFICIENCY PROGRAM**

This program is the same as that listed under Small Commercial and Industrial Sector section.

**h. CUSTOM TECHNOLOGY APPLICATIONS PROGRAM**

This program is the same as that listed under Small Commercial and Industrial Sector section.

**i. PAY AHEAD (SMART) SERVICE RATE**

This program is the same as that listed under Residential Sector section.

### **3.5. Governmental/Non-Profit Sector Programs**

#### **a. GOVERNMENT/SCHOOL/NON-PROFIT LIGHTING EFFICIENCY PROGRAM**

##### **Years during which program will be implemented**

January 2010 through May 2013

##### **Objective(s)**

This program encourages government, school, and non-profit customers in Allegheny Power's Pennsylvania service territory to upgrade to state-of-the-art energy efficient lighting technologies.

##### **Target market**

The target market for this program is Allegheny Power's approximate 19,700 governmental/non-profit customers in Pennsylvania.

##### **Program description**

The program provides increased incentives and equipment (at no up front costs to the customer) to these customer classes, for installing:

- T8 lamps: Replacing T12 lamps that includes the reduction in the number of lamps per fixture by 1 to 2 fewer lamps, the installation of high-efficiency electronic ballasts or achieving required energy savings.
- LED Exit Signs: Replace or retrofit existing incandescent exist signs w/ LED (provided to the customer at no upfront cost except shipping cost).
- LED Traffic Signals: Retrofit LED packs into existing incandescent units
- CFLs: Supply CFLs to this customer class via customer application (Provided to the customer at no upfront cost)

Allegheny Power is offering this program to encourage customers in Allegheny Power's Pennsylvania service territory to upgrade to new lighting technologies and to help overcome additional cost barriers associated with it.

##### **Implementation strategy (including expected changes that may occur in different program years)**

Allegheny Power will contract implementation administration activities including coordination with HVAC equipment distributors and installation contractors, marketing activities, rebate processing services provider contractor oversight, reporting, and program evaluation.

Allegheny Power will contract directly with rebate processing service providers.

Allegheny Power will leverage the Local Development District Associations (LDDA) of Pennsylvania to market this program to this customer sector. These Associations have established relationships with this target market and the Company is discussing coordination efforts with these groups.

Allegheny Power anticipates including LED lighting as an enhancement to the program after 2011 when CFLs become the sole market offering.

### **Program issues and risks and risk management strategy**

A significant risk to the program success is customers' access to capital to finance energy efficiency and conservation programs. The increased incentive structure along with resources available through state agencies and possible tax credits<sup>97</sup> and emphasizing potential energy and maintenance savings are expected to mitigate this risk.

An additional risk is that programs may not be approved in time to align with these customers' budget cycles for 2010. Possible mitigation strategies include:

- Request phased review and approvals for those programs at risk due to budget planning cycles.
- Consider contacting eligible customers in advance of approvals to alert them of a possible program.

Achieving estimated participation rates is a program risk. The program will be reviewed monthly to determine if participation rates are not as high as anticipated. If participation rates are lagging, the following steps will be evaluated:

- Modify marketing strategy;
- Modify incentives; and
- Modify or eliminate measures being offered.

Another risk is the possibility of an increase in the federal energy efficiency standards for commercial lighting equipment resulting in reduced energy savings based on the current commercial lighting equipment measure requirements. If and when these standards change, commercial lighting equipment requirements and/or energy savings will be modified to reflect the energy efficiency standards of commercial lighting equipment available at that time. The program manager will be responsible for monitoring these changes and updating each measure as needed.

### **Anticipated costs to participating customers**

- |                      |                                     |
|----------------------|-------------------------------------|
| • T8                 | \$150 / Fixture                     |
| • LED Exit           | \$ 35 / Fixture (Installation Only) |
| • LED Traffic Signal | \$ 65 / Single Fixture              |
| • CFL                | \$ 0 / Fixture                      |

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<sup>97</sup> Reference Additional Funding Table in Section 10.F.2.

### Ramp up strategy

Begin communicating program in the fourth quarter of 2009 so customers can plan and budget for projects for 2010. This program is expected to be ‘full launched’ that is, offered to the entire target population on the launch date. AP will execute the launch in this manner since it will have had some experience in program management in another state prior to the Pennsylvania launch. It is assumed that the ramp up period for this program will occur in the 2009 and 2010 plan years. In the 2009 plan year, the participation rates are projected to be 33% of future year levels. In the 2010 plan year, the participation rates are projected to be 50% of future year levels.

### Marketing strategy

Marketing activities will target eligible customers to inform them of the program, its components, and the associated benefits through bill inserts, direct mail, Allegheny Power website, trade shows, the business customer newsletter, and Account Managers. Allegheny Power will work with LDDAs to market the program to customer with whom they have an established relationship.

Marketing activities will include leveraging and promoting federal and state funding opportunities (stimulus dollars, tax incentives, grants, etc.) that may be associated with this program.<sup>98</sup>

Allegheny Power will promote a whole building approach to energy conservation for government entities by offering increased incentives for select projects and measures under the Government/School/Non-Profit Lighting Efficiency Program to those government entities that have undergone building energy audits. This program will provide information on the benefits of guaranteed energy savings contracts to government entities.

**Eligible measures and incentive strategy, include tables for each year of program, as appropriate showing financial incentives & rebate levels (e.g., \$ per measure, \$ per MWh or MW saved)**

Eligible Program Measures & Incentives		
MEASURE	REBATE (\$)	REBATE LEVEL (% of Incremental \$)
CFLs	100% of total expenditures	
T8s	\$25	67%
LED Exit Signs	100% of total expenditures	
LED Traffic Signals	\$92	57%

<sup>98</sup> Reference Additional Funding Table in Section 10.F.2.

**Program start date with key schedule milestones**

Allegheny Power will determine and measure key milestones achieved as referenced in program participation levels and savings tables for respective years.

- Program Marketing: Begin discussions with key customers early fourth quarter 2009
- Implementation: Award vendor contracts fourth quarter 2009
- Program Start Date: January 2010
- Program End Date: May 31, 2013<sup>99</sup>

**Assumed Evaluation, Measurement, and Verification (EM&V) requirements required to document savings by third-party consultant**

This program falls into the Level 1 EM&V category.<sup>100</sup>

All rebate applications will be reviewed upon receipt to verify adherence to eligibility requirements and applicant eligibility. A statistically valid sample of all rebate applications, based on 90% confidence level and a plus-or-minus 5% margin of error, will be selected for survey.

Information that will be collected for EM&V purposes will include the quantity of the measure installed, nameplate data from the existing model, the capacity (size) of the existing model, the nameplate data for the new model and the capacity (size) of the new model. A customer survey will also be completed.

TRC analysis of the program will occur annually to determine the feasibility of continuing the program; Allegheny Power will notify the Commission if it appears that changes are warranted in this program.

The EM&V Plan will be adjusted to meet statewide Plan Evaluator Requirements and/or per recommendation of the EM&V contractor to be hired.

**Administrative requirements – include utility staffing levels**

Allegheny Power will assign a program manager to oversee program implementation, contract management, tracking and reporting, and program evaluation. It is estimated that program management will require 0.25 FTE.

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<sup>99</sup> All projects accepted must be completed by May 31, 2013. This assumes Plan will end May 31, 2013.

<sup>100</sup> Reference Section 6.1.2. for details of Level 1 EM&V.

**Estimated participation – includes tables indicating metric(s) with target value(s) per year**

<b>Estimated Annual Participation</b>			
<b>PROGRAM YEAR</b>	<b>POTENTIAL MEASURES</b>	<b>PARTICIPATING CUSTOMERS</b>	<b>PARTICIPATING MEASURES</b>
<b>2009</b>	1,437,307	392	15,827
<b>2010</b>	1,440,391	5,532	197,527
<b>2011</b>	1,404,244	2,042	88,426
<b>2012</b>	1,374,444	383	28,760

**Estimated program budget (total) by year – include table with budget per year**

<b>Estimated Program Budget (Total) by Year</b>						
<b>PROGRAM YEAR</b>	<b>UTILITY ADMINISTRATIVE COSTS</b>	<b>MARKETING COSTS</b>	<b>OUTSIDE SERVICES</b>	<b>EVALUATION COSTS</b>	<b>INCENTIVES</b>	<b>TOTAL</b>
<b>2009</b>	\$249,613	\$40,000	\$18	\$13,218	\$130,501	<b>\$433,350</b>
<b>2010</b>	\$172,520	\$98,880	\$159	\$192,167	\$1,912,626	<b>\$2,376,353</b>
<b>2011</b>	\$176,433	\$101,848	\$212	\$186,082	\$1,147,942	<b>\$1,612,518</b>
<b>2012</b>	\$180,435	\$61,192	\$181	\$166,002	\$742,396	<b>\$1,150,206</b>
<b>TOTAL</b>	<b>\$779,002</b>	<b>\$301,920</b>	<b>\$571</b>	<b>\$557,470</b>	<b>\$3,933,464</b>	<b>\$5,572,427</b>

**Savings targets – include tables with total MWh and MW reduction goals per year and cumulative & tables that document key assumptions of savings per measure or project**

<b>Estimated Energy &amp; Demand Savings Targets</b>				
<b>PROGRAM YEAR</b>	<b>ANNUAL ENERGY SAVINGS (MWh)</b>	<b>PROGRAM ENERGY SAVINGS (MWh)</b>	<b>ANNUAL DEMAND SAVINGS (MW)</b>	<b>PROGRAM DEMAND SAVINGS (MW)</b>
<b>2009</b>	2,842	2,842	0.3	0.3
<b>2010</b>	36,061	38,903	2.8	3.0
<b>2011</b>	18,616	57,519	2.8	5.8
<b>2012</b>	8,416	63,997	2.2	8.0

**Cost-effectiveness – include TRC for each program year and cumulative**

The Government/School/Non-Profit Lighting Program's TRC is 7.1

Refer to Table 7A for TRC for each program year

**Other information deemed appropriate**

In an effort to enable all customer classes to gain added benefits, Allegheny Power plans to access and educate customers on the availability of incentives from available funding sources including, but not limited, to Federal Tax Credits for Energy Efficiency under the “Emergency Economic Stabilization Act of 2008” and/or Stimulus Funds under the “American Recovery and Reinvestment Act of 2009” as appropriate, and as funding becomes available.<sup>101</sup>

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<sup>101</sup> Reference Additional Funding Table in Section 10.F.2.



b. **COMMERCIAL HVAC EFFICIENCY PROGRAM**

This program is the same as that listed under Commercial/Industrial Small Sector section.

c. **CUSTOM TECHNOLOGY APPLICATIONS PROGRAM**

This program is the same as that listed under Small Commercial and Industrial Sector section.

d. **PROGRAMMABLE CONTROLLABLE THERMOSTAT (PCT) PROGRAM**

This program is the same as that listed under Residential Sector section.

e. **PAY AHEAD (SMART) SERVICE RATE**

This program is the same as that listed under Residential Sector section.

f. **COMMERCIAL AND INDUSTRIAL DRIVES PROGRAM**

This program is the same as that listed under Commercial/Industrial Large Sector section.

g. **CUSTOMER LOAD RESPONSE PROGRAM**

This program is the same as that listed under Commercial/Industrial Large Sector section.

h. **CUSTOMER RESOURCES DEMAND RESPONSE PROGRAM**

This program is the same as that listed under Commercial/Industrial Large Sector section.

i. **DISTRIBUTED GENERATION PROGRAM**

This program is the same as that listed under Commercial/Industrial Large Sector section.

j. **CRITICAL PEAK REBATE (CPR) RATE**

This program is the same as that listed under Residential Sector section.

**k. TIME OF USE RATE (TOU) WITH CRITICAL PEAK PRICING (CPP) RATE**

This program is the same as that listed under Residential Sector section.

**l. HOURLY PRICING OPTION (HPO) RATE**

This program is the same as that listed under Residential Sector section.

## 4. Program Management and Implementation Strategies

### 4.1. Overview of EDC Management and Implementation Strategies

#### 4.1.1. Describe the types of services to be provided by EDC as well as consultants, trade allies, and CSPs. Indicate which organizations will provide which services and the basis for such allocation. Reference reporting and EM&V information from Sections 5 and 6 below.

In summary, Allegheny Power will perform the following services:

- Contract Management oversight
  - EE&C and DR Plan Consultation and Design
  - Rebate Processing
  - Recycling Services
  - Residential Energy Audit Services
  - Residential Low Income Services
  - Non-residential Energy Audit Services
  - Distributed Generation Management Services
  - Demand Services Consultant
  - Marketing and Advertising
  - EM&V
- Customer Service Center support
- Direct marketing to large commercial and industrial key account customers

Allegheny Power believes the most cost-effective method for program implementation is to contract with vendors for specific services to leverage similar activities across the Plan portfolio of programs and measures. Additionally, the Company will leverage its contracts with vendors for its Maryland EE&C Plan to ensure best pricing for like services.

In summary, Allegheny Power will hire consultants, contractors, and CSPs for the following services:<sup>102</sup>

- **EE&C and DR Plan Consultation and Design:** Allegheny Power contracted with EDS to provide consulting services associated with EE&C and DR Plan development.
  - Primarily, EDS provided consulting services for Demand Response Programs.
- **Rebate Processing for Programs that provide customer rebates:**<sup>103</sup> Allegheny Power believes the most cost-effective method for processing

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<sup>102</sup> This summary does not include contracted consulting services for the development of the SMIP.

rebates is contracting the service. Additionally, the Company will leverage its contract with this vendor for its Maryland EE&C rebate programs to ensure best pricing.

- Residential Energy Star and High Efficiency Appliance Program
  - Compact Fluorescent Light (CFL) Rewards Program
  - Residential HVAC Efficiency Program
  - Commercial HVAC Efficiency Program
  - Commercial Lighting Efficiency Program
  - Government/non-Profit Lighting Efficiency Program
  - Commercial and Industrial Drives Program
- **Appliance Recycling Services:** Allegheny Power believes the most cost-effective method for processing rebates is contracting the service. Additionally, the Company will leverage its contract with this vendor for its Maryland EE&C recycling programs to ensure best pricing.
    - Refrigerators
    - Freezers
    - Room Air Conditioners
  - **Energy Audit Services for Residential Programs:** Allegheny Power believes this is the most cost-effective method of procuring this service as the Company can leverage existing relationships with providers of these services through its LIURP program and with PA Home Energy.
    - Residential Home Performance Program
  - **Plan Administration for Residential Low Income programs:** Allegheny Power will contract with the program administrator currently under contract for LIURP administration. The program administrator will be responsible for implementation coordination, marketing activities, rebate and recycling processing services provider contract oversight, reporting, and program evaluation.
    - Low Income Home Performance Check-up Audit and Appliance Replacement Program
    - Low Income Joint Utility Usage Management Program
    - Low Room Air Conditioner Measure (added to existing LIURP Program)
  - **Energy Audit Services for Non-Residential Programs:** Allegheny Power plans to contract with a CSP who the Company has contracted for similar services, to perform Commercial and Industrial Energy Audits required under its programs. This approach ensures the expertise needed in order to complete these services accurately, timely and cost-effectively.

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<sup>103</sup> The Custom Technologies Applications Program and the Custom Applications Program rebate processing will be handled by Allegheny Power.

- **Management Services for Distributed Generation:** Allegheny Power plans to contract with a Distributed Generation provider who will be responsible for operating and maintaining customer owned standby generation under the Company's Distributed Generation Program. This approach ensures the expertise needed in order to dispatch customer generation successfully to target the Company's highest load hours.
- **Demand Response Programs:** Allegheny Power has executed a contract with a Conservation Services Provider consultant to complete a market assessment of the demand load resources that are available from Allegheny Power's commercial and industrial customer base.<sup>104</sup>
- **Marketing and Advertising:** Allegheny Power has contracted with the same advertising firm hired for the Pennsylvania Consumer Education Plan and the Maryland EE&C and DR Plan. This will leverage similar activities as well as retain the same look and feel of all promotional materials.
  - All Programs
- **EM&V Services:** Allegheny Power has executed a contract with an EM&V CSP to perform all evaluation, measurement and verification activities to support State TRM data collection, measurement, and reporting requirements.
  - All Programs

Allegheny anticipates that some contracts will be performance-based to promote goal achievement. Plan Implementation Providers will be responsible for plan implementation including but not limited to: program implementation including hiring all sub-contractors required for successful program implementation and quality; marketing coordination; reporting on identified metrics, including presenting to stakeholder groups as requested; customer issue resolution; best practices; and early identification of program success risks, including recommendations to mitigate or leverage.

Allegheny Power has executed a contract with an EM&V CSP to perform evaluation, measurement, and verification (EM&V) services. This EM&V CSP is independent and not affiliated with the Plan Implementation Providers or with Allegheny Power. EM&V contractors will be responsible for: completing a baseline study should this be determined to be beneficial to support alternative measurement and verification for some programs and measures; completing all measurement and verification activities to support State TRM data collection, measurement, and reporting requirements as well as PJM Energy Efficiency M&V Manual specifications for measuring and reporting EE Resource bids into the RPM; developing and maintaining EM&V database; and working with the statewide Plan Evaluator EM&V audits.

Allegheny Power will assign contract and program managers to oversee Plan Implementers and EM&V contractors. The program managers will be responsible

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<sup>104</sup> Roth Brothers, Inc. is a registered CSP in Pennsylvania. See Section 4.3. and Appendix 10.C. for details.

for: contract management and oversight including contract compliance, reporting activities, invoice processing, budget variance, and serving as a liaison between the contractors and other parties, both internal and external; coordinating internal training; program results analysis; and recommendations for program adjustments to ensure target achievement.

Allegheny Power will evaluate program and plan results to report to Commission. The Company's Corporate Communications will be responsible for designing and maintaining the external website to promote EE&C and DR Plan; coordination of marketing efforts through bill inserts and customer newsletters; and, managing the advertising agency contract.

Allegheny Power's Customer Service Center (CSC) will be responsible for ensuring CSC representative training; quality control; responding to customer inquiries; tracking complaints and other pertinent information in customer information system; performing quality surveys; promoting programs when applicable to customers calling the CSC for other reasons (for example, marketing low-income programs available to customers inquiring about bill payment assistance); and promoting programs to commercial and industrial (C&I) customers through email distribution lists and "Message on Hold."

The Customer Account managers and engineers will be responsible for: establishing and maintaining relationships with commercial and industrial customers to directly promote programs; establishing and maintaining relationships with trade allies, vendors, retail stores, etc.; and attending events to market programs such as home shows and municipal events.

The Customer Programs Development group will be responsible for Plan and program evaluation for effectiveness.

Contractors will be hired for:

- Advertising and Marketing Plan development and implementation including: reporting on identified metrics; focus group and other message testing and review; and ad development and placement.
- Rebate processing including customer inquiry handling, database development, and reporting on identified metrics.
- Recycling of refrigerators, freezers, and window air conditioning units including reporting on existing and replacement equipment specs and environmentally sound recycling of old appliances.
- Developing and maintaining an online home energy audit tool that will interface with actual customer data and recommend programs and estimated savings from participation.
- Performing energy audits for residential, commercial, and industrial customers.
- Performing Industrial Custom Application services including performing comprehensive energy audits, completing reports for program manager review

and approval, and completing approved measures recommended on energy audit report.

- Perform Demand Response services including: Allegheny Power will conduct an annual nomination process with PJM Curtailment Service Providers (CSP). The result of this process will be contracts with PJM CSPs for demand savings through callable load curtailment.
- Perform implementation of Distributed Generation Program including: marketing, obtain customer contracts and administer make ready work, M&V plan development, obtain and track data, and implement events.
- Performing measurement and verification services including: completing a baseline study; completing all measurement and verification activities to support State TRM data collection, measurement, and reporting requirements as well as PJM Energy Efficiency M&V Manual specifications fore measuring and reporting EE Resource bids into the RPM; developing and maintaining EM&V database; and, working with the statewide Plan Evaluator during EM&V audits.

**4.1.2. Describe how the risk categories of performance, technology, market and evaluation can affect the programs and any risk management strategies that will be employed to mitigate those risks.**

Performance risk will be identified through early warning systems including customer complaints and inquiries, focus groups, and quality surveys and will be addressed by the program managers.

Allegheny Power is designing EE&C programs that use established and proven technologies thereby mitigating the technology risk for these programs.

A crucial tool in affecting customer change in behavior is providing customers with information on how they use energy in conjunction with energy prices. Allegheny Power's EE&C and DR Plan relies heavily on the availability of Smart Metering Infrastructure to provide customers with this knowledge.<sup>105</sup> Should approval of the Smart Meter Technology Procurement and Installation Plan (SMIP) be delayed, Allegheny Power would be at risk of missing demand reduction targets.

Customer participation in programs is expected to be impacted by the economic downturn and the tightening of the credit markets. Customer participation risk in programs will be mitigated through marketing and advertising program benefits including customer incentives to participate and energy savings associated with participation as well as assisting the customer in determining other resources for funding and assistance (such as tax benefits, grants, other agency programs).<sup>106</sup>

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<sup>105</sup> For additional detail and graphical depiction of SMIP, refer to Section 10.F.3.

<sup>106</sup> See Section 10.F.2. for a partial listing of these resources.

Other market participation risks will be mitigated through relationship building and support for programs. The state should consider partnering with financial institutions to offer no and low-interest loans on a state-wide basis, as Allegheny Power has not been successful identifying banks or other financial institutions to offer an Allegheny Power program.

Evaluation risk will be addressed through review of EM&V contractor reports and implementation reports to ensure consistency in methodology. Differences in assumptions will be fully vetted with internal and external stakeholders (including the statewide Plan Evaluator) to determine the most appropriate result.

Others risks to consider regarding delays in the deployment of smart meters include: insufficient manufacturing capacity; higher than expected failure rates; and incompatibility of certain meter manufactures with dependent devices (e.g. T-stat in-home display).

**4.1.3. Describe how EDC plans to address human resource and contractor resource constraints to ensure that adequate personnel and contractors are available to implement the EE&C plan successfully.**

Allegheny Power expects to hire approximately 15 new FTEs to administer, manage, and evaluate programs. New and existing resources will be fully leveraged to achieve maximum efficiency between programs within the plan.

With the projected number of energy audits for all customers and increased comprehensive weatherization services for residential customers with low to moderate incomes, Allegheny Power has identified a resource constraint for performing home energy audits and comprehensive weatherization services. This has been an issue for several years as Allegheny Power has needed to contract with both Community Action Agencies and private contractors in order to have adequate coverage of Allegheny Power's service territory as well as contractors able to provide the scope of energy conservation measures under the company's Low Income Usage Reduction Program (LIURP). It is Allegheny Power's intent to meet with available contractors prior to program start-up to review scope of work and projected participant levels to allow contractors the opportunity increase and train their workforce.

Allegheny Power will also work with Stakeholder groups interested in participating in discussions on how to best resolve resource issues and on how to deploy ARRA funding effectively to meet this workforce deficiency.

**4.1.4. Describe “early warning systems” that will be utilized to indicate progress towards the goals and whether they are likely to be met. Describe EDCs approach and process for shifting goals and funds, as needed, between programs and adding new measures/programs.**

Currently there is a corporate “Enterprise Reporting Program” initiative focused on improving the ability to access consistent and reliable information to enable



effective business decisions and analysis. As part of this program, reporting tools will be implemented to enable access to information in a timely and efficient manner. Allegheny Power will use these tools to obtain the data necessary to monitor progress towards goals in order to make adjustments to programs as needed.

Allegheny Power will monitor plan and plan component metrics to assess effectiveness. Once it is felt that a program has been in the field long enough to validate effectiveness (we expect this will vary by program and measure) and it is not meeting participation or other design expectations, a review of implementation plan, assumptions, and other pertinent information will be completed to determine best course of action. Should the Company decide it is advisable to cancel a plan component or program to focus resources on more successful or new programs, the Commission will be notified and the process for amending the plan initiated.

#### **4.1.5. Provide implementation schedules with milestones.**

Allegheny Power will begin a phased program launch to customers two months after Plan approval is received with some early soft awareness marketing for programs for which success is heavily influenced by customer budget and planning cycles (largely government, schools, and municipalities, and commercial and industrial programs). Assuming approval is received early November 2009, the implementation schedule and key milestones are outlined below:

October – November 2009

- Begin program awareness campaign for government, schools, and municipalities, and commercial and industrial customers to ensure projects are included in 2010 budget.
- Execute contracts to provide identified services.
- Print collateral materials and identify events for program marketing.

December 2009

- Complete EE&C and DR Program website.
- Complete Plan training for all internal audiences.
- Finalize marketing campaign and media buys.
- .
- Establish relationships with trade allies, vendors, retail stores, etc.

January 2010

- Launch Residential Programs.
- Launch Low Income Programs.
- Launch Government/non-Profit Programs.
- Launch Commercial & Industrial Programs.

April 2010

- Complete EM&V baseline studies. Complete program database tracking development

December 2010

- Complete Demand Load Resources Market Assessment Study.

January 2011

- Launch Customer Resources Demand Response Program
- Launch Customer Load Response Program
- Launch Distributed Generation Program
- Launch Residential Efficiency Rewards Program.
- Launch Programmable Controllable Thermostat (PCT) Program.
- Launch Demand Response Rate Programs.

May 2013

- Close Programs.

#### **4.2. Executive management structure:**

##### **4.2.1. Describe EDC structure for addressing portfolio strategy, planning, review of program metrics, internal and external communications, budgeting and financial management, program implementation, procurement, program tracking and reporting, and Quality Assurance/Quality Control (QA/QC). Include EDC organization chart for management team responsible for implementing EE&C plan.**

Allegheny Power's Customer Management group reporting to the Executive Director of Customer Service is responsible for portfolio development and evaluation, implementation, measurement and verification, and reporting.

The Executive Council reviewed the EE&C Plan prior to submission to the Commission. Program level reviews, including program metrics, are completed by Customer Management.

Corporate Communications is responsible for all internal and external portfolio communication coordination with the exception of providing EE&C Plan training key employees. This is handled by Allegheny Power's Customer Management Group (Customer Management) as a part of implementation.

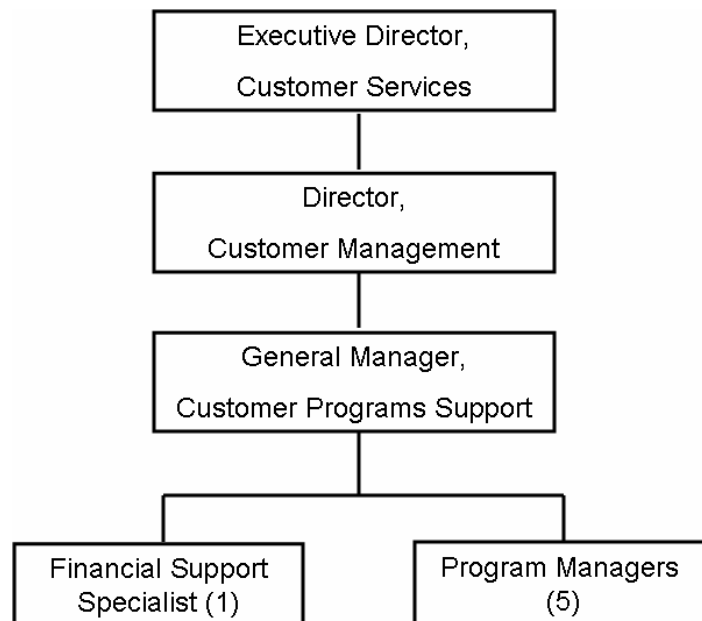
Customer Management is responsible for budgeting, tracking, and reporting of Plan financials. Program Managers are responsible financial management and review of assigned programs. The Executive Director, Customer Services and the Director, Customer Management will review program financials monthly.

Procurement for Plan services is the responsibility of the Program Managers with guidance and assistance from the Procurement group. All services are competitively bid per Company business practice. Approvals of contracts and

purchase requisitions follow the Company's internal business practice concerning expense and cost approval limits.

Plan Quality Assurance/Quality Control will be the responsibility of Customer Management in conjunction with the Allegheny Power Audit Services group. All applicable Sarbanes-Oxley Controls and Business Practices will be followed and a review and/or audit will be completed annually.

The organization chart for management team responsible for implementing EE&C plan is depicted below:



**4.2.2. Describe approach to overseeing the performance of sub-contractors and implementers of programs and how they can be managed to achieve results, within budget, and ensure customer satisfaction.**

The Customer Programs Support group will be responsible for Plan implementation. A program manager will be assigned to each program to provide contract management oversight and administration for both the program implementers and the sub-contractors hired by the implementation providers. Allegheny anticipates that some contracts will be performance-based to promote goal achievement.

The Financial Support Specialist will provide support to program managers to ensure accurate invoices. Customer satisfaction will be measured by independent contractors as well as by Allegheny Power.

#### 4.2.3. Describe basis for administrative budget.

Allegheny Power calculated administrative costs by estimating costs associated with specific activities, utilizing price quotations and by using actual charges year to date to establish program development costs. Administrative costs include start-up costs such as IT, database and web portal development and program development. IT, database and web portal development costs were estimated based on IT requirements that were identified specific to the proposed EE&C and DR programs. Other administrative costs include program development costs, with this component based on actual charges year to date. See Tables 6A and 6B for the common and specific costs per customer sector for administration costs.

#### 4.3. Conservation Service Providers (CSPs):

##### 4.3.1. List any selected CSPs, describe their qualifications and basis for selection (include contracts in Appendix).

**Demand Services Consultant:** Allegheny Power has contracted with Roth Bros. Inc.<sup>107</sup> to complete an assessment of the demand response market for Allegheny Power's small/large commercial, small/large industrial governmental, schools, higher education, non-profit and municipal customer segments. This study will help the Company to better understand and quantify customer interest and required incentives and to assist with program design details.

Allegheny released an RFP for completion of this study. Three consultants responded.

Roth Bros. Inc. was selected based on the technical and experience evaluation criteria. This capability and experience coupled with their low bid made them the successful bidder.

Roth Bros. Inc. and Enerlogics submitted a joint proposal to provide a market assessment of the demand response market for Allegheny Power's small/large commercial, small/large industrial governmental, schools, higher education, non-profit and municipal customer segments. Enerlogics has developed demand response systems for PJM and numerous commercial, industrial, and institutional customers and specializes in software and telecommunications systems related to demand response. Roth Bros., Inc. is a technology company specializing in building automation systems and hardware to implement demand response programs. The staff at Enerlogics has significant experience with implementing and designing demand response programs and presented a customized proposal that addressed Allegheny Power's concerns with market assessment, program design, implementation, and required support.

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<sup>107</sup> Roth Brothers, Inc. is a registered CSP in Pennsylvania. See Appendix 10.C. for contract.

**Rebate Processing:** Allegheny Power has contracted with Blue Monde LLC dba Promotion Fulfillment Center, a registered CSP, to process, track data and issue rebates for Allegheny Power's residential, commercial, industrial, governmental, schools, higher education, non-profit and municipal customer prescriptive type programs.

Allegheny Power released an RFP for these services in which four consultants responded.

Blue Monde LLC dba Promotion Fulfillment Center was selected based on technical, experience and financial evaluation criteria.

**Recycling Services:** Allegheny Power has contracted with JACO Environmental Inc., a registered CSP, to schedule customers, track data, pick-up, issue rebates and recycle refrigerators, freezers and room air conditioners for Allegheny Power's residential prescriptive recycling programs.

Allegheny Power released an RFP for these services in which two consultants responded.

JACO Environmental Inc. was selected based on technical, experience and financial evaluation criteria.

**Low Income Program Administration:** Allegheny Power has contracted with Dollar Energy, a registered CSP, to provide program administration, implementation coordination, marketing activities, rebate and recycling processing services provider contract oversight, reporting, and program evaluation for Allegheny Power's residential low income programs.

Allegheny Power released an RFP for these services in which two consultants responded.

Dollar Energy was selected based on technical, experience and financial evaluation criteria.

**Residential Energy Audit Services:** Allegheny Power has contracted with Aclara, a registered CSP, to provide program administration, data tracking and implementation of an online energy analyzer software for Allegheny Power's residential Home Performance program.

Allegheny Power released an RFP for these services in which two consultants responded.

Aclara was selected based on technical, experience and financial evaluation criteria.

**Residential Energy Audit Services:** Allegheny Power has contracted with Energy Smart Products LLC, whom has applied to become a CSP, to provide, package and ship CFL bulb as requested thru the online energy analyzer software for Allegheny Power's residential Home Performance program.

Allegheny Power released an RFP for these services in which two consultants responded.

Energy Smart Products LLC was selected based on technical, experience and financial evaluation criteria.

**Non-residential Energy Audit Services:** Allegheny Power has contracted with Eaton Corporation, a registered CSP, to complete energy audit assessments of large custom EE&C customer projects for Allegheny Power's mid-sized/large commercial, mid-sized/large industrial customers segments.

Allegheny released an RFP for completion of this study. Five consultants responded.

Eaton Corporation was selected based on technical, experience and financial evaluation criteria.

**EE&C Equipment Provider:** Allegheny Power has contracted with Schaedler Yesco Distributing, a registered CSP, to provide, package and ship CFL bulbs and LED Exit Signs for Allegheny Power's government lighting efficiency program.

Allegheny Power released an RFP for these services in which six consultants responded.

Schaedler Yesco Distributing was selected based on technical, experience and financial evaluation criteria.

**Marketing and Advertising:** Allegheny Power has contracted with Garrison Hughes, whom has applied to become a CSP, to provide marketing, advertising and strategic communication services for Allegheny Power's portfolio of EE&C and DR programs.

Allegheny Power released an RFP for these services in which three consultants responded.

Garrison Hughes was selected based on technical, experience and financial evaluation criteria.

**EM&V:** Allegheny Power has contracted with PA Consulting Group Inc., a registered CSP, to perform evaluation, measurement and verification services for Allegheny Power's portfolio of EE&C and DR programs.

Allegheny Power released an RFP for these services in which five consultants responded.

PA Consulting Group Inc was selected based on technical, experience and financial evaluation criteria.

#### **4.3.2. Describe the work and measures being performed by CSPs.**

**Demand Services Consultant:** Roth Bros. Inc. will perform a study to assess feasibility of contracted demand response load reduction programs.

The scope of work includes:

Allegheny Power has contracted with Roth Bros. Inc.<sup>108</sup> to complete a market assessment of the demand response potential in Allegheny Power's commercial, industrial and government customer base. This study will focus on identifying a controllable load reduction and assigning confidence levels. As part of this study, the vendor will review the impact of the discontinuation of the PJM Interruptible Load Response program in 2012.

**Rebate Processing:** Blue Monde LLC dba Promotion Fulfillment Center will qualify prescriptive rebates, convert rebate data to electronic format, develop and maintain a data tracking database and issue rebate checks to customers for Allegheny Power's residential, commercial, industrial, governmental, schools, higher education, non-profit and municipal customer prescriptive type programs.

**Recycling Services:** JACO Environmental Inc. will schedule with customers, gather and maintain data in a tracking database, pick-up units at customer homes, issue rebates and recycle refrigerators, freezers and room air conditioners according to EPA guidelines for Allegheny Power's residential prescriptive recycling programs.

**Low Income Program Administration:** Dollar Energy will provide program administration, implementation coordination, marketing activities, rebate and recycling processing, services provider contract oversight, reporting, and program evaluation for Allegheny Power's residential low income programs.

**Residential Energy Audit Services:** Aclara will provide program administration, data tracking and implementation of an online energy analyzer software for Allegheny Power's residential Home Performance program.

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<sup>108</sup> Roth Bros. Inc. is a registered CSP in Pennsylvania. See Appendix 10.C. for contract.

**Residential Energy Audit Services:** Energy Smart Products LLC, whom has applied to become a CSP, will provide, package and ship CFL bulbs as requested thru the online energy analyzer software for Allegheny Power's residential Home Performance program.

**Non-residential Energy Audit Services:** Eaton Corporation will complete energy audit assessments of large custom EE&C customer projects for Allegheny Power's mid-sized/large commercial, mid-sized/large industrial customers segments.

**EE&C Equipment Provider:** Schaedler Yesco Distributing will provide, package and ship CFL bulbs and LED Exit Signs for Allegheny Power's government lighting efficiency program.

**Marketing and Advertising:** Garrison Hughes, whom has applied to become a CSP, will provide marketing, advertising and strategic communication services for Allegheny Power's portfolio of EE&C and DR programs.

**EM&V:** PA Consulting Group Inc. will provide evaluation, measurement and verification services for Allegheny Power's portfolio of EE&C and DR programs.

**4.3.3. Describe any pending RFPs to be issued for additional CSPs.**

**Energy Audit Services for Residential Program:** Allegheny Power will issue a RFP for additional energy audit services.

**Distributed Generation Manager:** Allegheny Power will issue a RFP for the operation, maintenance and dispatch provider for customer generators enrolled under the Company's Distributed Generation Program.



## **5. Reporting and Tracking Systems**

### **5.1 Reporting**

#### **5.1.1. List reports that would be provided to the Commission, the schedule for their delivery, and the intended contents.**

Per the implementation plan, issued by this Commission on January 15, 2009, the first annual report due to the Commission is July 15, 2010 and that at this time, no other reporting requirements exist although quarterly reporting requirements are mentioned in the statewide Plan Evaluator RFP. Allegheny Power will comply with all reasonable reporting requirements.

The Allegheny Power Customer Information System (CIS) modernization effort, through a combination of technologies, includes requirements to provide reports on energy conservation programs as stipulated by Commission ruling.

It is also Allegheny Power's understanding that the statewide Plan Evaluator will define reports and intended contents as a part of the Phase 1 deliverable to be completed 90 days after contract execution. Allegheny Power will comply with all reasonable statewide Plan Evaluator's recommendations and/or Commission directives. Expected contents include an executive summary along with plan and individual programs and measures: budget vs. actual costs; measure and verification results; effectiveness (savings and annual TRC results); customer complaints; and, recommendations for changes, improvements, enhancements or cancellations. Allegheny Power does not expect to report to the customer level.

#### **5.1.2. Describe data that would be available (including format and time frame of availability) for Commission review and audit.**

Allegheny Power will comply with the all reasonable data requirements per the statewide Plan Evaluator's recommendations and/or Commission directives. Examples of expected data to be accessible include: customer account number, meter number, and service location; program participation information; customer complaint data; program costs; evaluation, measurement, and verification data.

### **5.2 Project Management Tracking Systems**

#### **5.2.1. Provide brief overview of the data tracking system for managing and reporting measure, project, program and portfolio activities, status and performance as well as EDC and CSP performance and expenditures.**

Allegheny Power will use its customer information system (CIS) and other technologies to be determined to track energy conservation programs. The data tracking system will enable the measuring and tracking of customer counts per program and measure, benefits from the programs and measures, expenditures per program and measure and other details as required for the various programs and

measures. Data integrity will be ensured through proper security access and mechanisms will be implemented to ensure data validation.

Consideration is being given to obtaining the services from qualified vendors to provide services to develop, build, host and deploy a Data Base Tracking System related to Allegheny Power's Plan.

**5.2.2. Describe the software format, data exchange format, and database structure you will use for tracking participant and savings data. Provide examples of data fields captured.**

The specifications for the data tracking system is currently in development and not available at this time.

**5.2.3. Describe access and mechanism for access for Commission and statewide EE&C Plan Evaluator.**

Allegheny Power will provide the Commission with required data samples electronically directly to the statewide Plan Evaluator provided database or by whatever method is deemed appropriate. Allegheny Power does not expect to provide third party access directly to data systems due to customer confidentiality, privacy, and security concerns. Should the statewide Plan Evaluator or the Commission request access to Allegheny's data system, the Company will arrange an on-site visit with a database expert to review with requestor.

## 6. Quality Assurance and Evaluation, Measurement and Verification

### 6.1 Quality Assurance/Quality Control

#### 6.1.1. Describe overall approach to quality assurance and quality control.

Allegheny Power will build quality control checks into each program and measure as well as at key customer touch points. The Program Manager will review reports to identify issues and take action necessary to resolve. Quality checks are summarized below:

- Customer Satisfaction: Customer satisfaction for overall plan offerings and program participation will be assessed through random survey.
- Call Center Support: An expected service level will be set based on best practices and benchmarking. Calls will be monitored for quality.
- Rebate Programs: Customers will be required to submit a completed rebate form, a copy of the sales receipt and include the UPC label from the box of the appliance (where applicable). The Rebate Contractor will review all rebate applications upon receipt to verify adherence to eligibility requirements and applicant eligibility. A statistically valid sample of all rebate applications, based on 90% confidence level and plus-or-minus 5% margin of error, will be selected for survey or site visit depending on the measure. The refrigerator and freezer recycling measures also include verification that an operating refrigerator or freezer was removed from a customer's premises, and that the refrigerator or freezer was appropriately recycled.
- HVAC Programs: A statistically valid sample of all rebate applications based on a 90% confidence level and a plus-or-minus 5% margin of error, will be selected for post-installation inspection. Inspections will include a site visit to verify energy-efficient technical specifications. Company employees will perform 90% of the site visits, to include on-site verification of equipment installation. The other 10% of the site visits will be performed by a certified contractor, to include testing for proper installation and operation.
- Home Audit Programs: Allegheny Power will audit 20% of each certified contractor's projects in the first year and 5% per year thereafter for quality assurance. The Company expects that contractor training programs would be modified to address any trends discovered through the audit process. Reports will be prepared and maintained by the third-party administrator to verify adherence to customer eligibility requirements. A statistically valid sample, based on a 90% confidence level and a plus-or-minus 5% margin of error, will be selected annually for post-installation inspection. Inspections will include a site visit to verify energy-efficient technical specifications and quantities.
- Drives and Customer Application Programs: All applications will be reviewed by Allegheny Power upon receipt to verify adherence to eligibility

requirements and applicant eligibility. A statistically valid sample, based on a 90% confidence level and a plus-or-minus 5% margin of error, will be selected annually for post-installation inspection. Inspections will include a site visit to verify energy-efficient technical specifications and quantities. Pre-installation and post-installation energy use and energy savings will be estimated using engineering calculations and/or one-time or short-term in-situ end-use measurements. One-time measurements will be used where the operating factor and hours of operations are consistent. Short-term measurements will be used where the operating factor and the hours of operation are more variable.

**6.1.2. Describe procedures for measure and project installation verification, quality assurance and control, and savings documentation.**

Allegheny Power will meet or exceed the EM&V requirements of the Pennsylvania Technical Reference Manual (TRM) and to use the protocols that are adopted and implemented by the Statewide Plan Evaluator for Evaluation, Measurement and Verification such as the Energy Star Portfolio Manager and Home Performance with Energy Star data collection protocols, where appropriate. Additionally, the information provided below will be adjusted if recommended by the EM&V contractor once hired as well as per recommendations from the statewide Plan Evaluator. Finally, as the Company works with State agencies, partners, trade allies, and other key stakeholders to improve and maximize program and measure design, its EM&V plan will be adjusted accordingly. The goal is to balance the costs of EM&V processes, program and measure effectiveness, and other necessary considerations to provide the best benefit to customers while achieving energy consumption and demand reduction targets.

Once it is expected to be beneficial to participate in the PJM RPM Market,<sup>109</sup> EM&V plans will be modified to ensure compliance with the PJM Energy Efficiency M&V Manual.<sup>110</sup> Any incremental costs to comply with PJM M&V requirements will be netted against the revenues from the RPM market participation.

Demand and energy savings may be derived from a computation using a combination of measurements of some parameters and estimates of others. Consideration will be given to each parameter's contribution to the overall uncertainty of the estimated savings. Estimates may be based on historical data

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<sup>109</sup> Allegheny Power evaluated a possible bid of the EE&C plan for the PE service territory into the May 2009 Base Residual Auction (BRA) for Delivery Year 2012/2013. The results of this BRA resulted in a clearing price of \$16.46 for the Allegheny Power LDA. At that clearing price, the estimated administrative cost required to support PE's participation in the auction – including the cost to complete the required PJM reporting, the cost to perform the EM&V per the PJM M&V Manual, and the cost of potential PJM audits - would have exceeded the revenue derived from the auction.

<sup>110</sup> PJM Manual 18B: Energy Efficiency M&V Manual,  
<http://www.pjm.com/documents/~media/documents/manuals/m18b.ashx>

such as recorded data, manufacturer's published ratings and representative sampling.

Level I: Deemed Savings

Level 1 measurement supports the programs and measures for which the deemed savings approach is appropriate. These are the programs and measures for which algorithms are available in the PA TRM.

Applicable Programs and Measures:

- Residential Energy Star and High Efficiency Appliance Program
  - Room Air Conditioner
  - Clothes Washer
  - Clothes Dryer
  - Dishwashers
  - Refrigerator
  - Freezer
  - Programmable Thermostat
- Residential CFL Rewards Program
  - CFL Lighting
- Residential HVAC Efficiency Program
  - Central Air Conditioners
  - Heat Pumps
- Residential Home Performance Program
- Residential Low Income Programs
- Commercial HVAC Program
  - Central Air Conditioners
  - Heat Pumps
- Commercial Lighting Program
  - T8 lamps
  - T5 lights
  - LED Exit Signs
  - Occupancy Sensors
- Government & non-Profit Lighting Efficiency Program
  - T8 lamps
  - CFL's
  - LED Exit Signs
  - LED Traffic Signals

Level II: Custom Measurements

Level II Custom Measurements are appropriate for custom programs and measures and where on-site measurement is preferred over the Level I: Deemed Savings approach. Pre-installation and post-installation energy use and energy savings will be estimated using engineering calculations and/or one-time or short-term in-situ end-use measurements. The demand reduction will be estimated or measured using one-time or short-term measurements. One-time measurements will be used where the operating factor and hours of operation are consistent. Short-term measurements will be used where the operating factor and the hours of operation are highly variable. The difference between one-time measurement and short-term measurement is that for a one-time measurement, a "snap-shot" is taken pre-installation and post-installation, whereas for a short-term measurement portable monitoring equipment is installed for up to a week to measure the pre-installation and/or post-installation performance of the specific measure installed.

Applicable Programs and Measures:

- Commercial and Industrial Drives Program
  - Variable Speed Drives
- Custom Technology Applications Program
- Custom Applications Program
- Rate-based Programs
- Demand Response Programs

Allegheny Power will create a database of participating customers including their application date, installation date, incentive date and amount (where applicable), customer input regarding their impression of the effectiveness of the measures and any commentary they wish to provide along with the appropriate measurement algorithms and measurement methodologies.

**6.1.3. Describe process for collecting and addressing participating customer, contractor and trade ally feedback (e.g., suggestions and complaints).**

Customer satisfaction surveys will be completed to assess awareness of the EE&C and DR Plan, to assess satisfaction with programs and measures, and to solicit customer suggestions. This data will be collected as a part of existing surveys and as a part of measurement and verification. In addition, Allegheny will conduct EE&C Plan specific surveys if conditions warrant and budget permits.

Customers may also provide feedback to the customer service center via phone, mail, email, or online. The customer contact will be handled through a self-service option if available and selected, or it will be processed by a customer service representative. All contacts are recorded in a contact management system. The program manager and/or implementation provider will be responsible for handling escalated customer issues.

Contractor and trade ally feedback will be collected primarily through the program managers and implementation providers. Secondly, this information

will be collected via account managers and customers. All data and information will be recorded in a contact management system.

**6.2 Describe any planned market and process evaluations and how results will be used to improve programs.**

Program managers and program developers will review programs and measures monthly to assess current Plan performance to target for all Plan metrics. Should results fall short of expectations, Allegheny Power will consider completing a market assessment study to better understand its market base.

The EM&V Contractor may be required to complete a baseline study for existing programs.

Allegheny Power has contracted with Roth Bros., Inc.<sup>111</sup> to complete a market assessment of the demand response potential in Allegheny Power's commercial, industrial and government customer base. This study will focus on identifying a controllable load reduction and assigning confidence levels. As part of this study, the vendor will review the impact of the discontinuation of the PJM Interruptible Load Response program in 2012.

**6.3 Describe strategy for coordinating with the statewide EE&C Plan Evaluator (nature and type of data will be provided in a separate Commission Order).**

Allegheny Power will assign an Allegheny Power EM&V coordinator to serve as a liaison between the Company, the Company's EM&V contractor, and the statewide Plan Evaluator. Allegheny Power views this as a collaborative effort and welcomes the review and input from the statewide Plan Evaluator.

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<sup>111</sup> See Section 4.3. for additional information on Roth Bros. Inc.

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## 7. Cost-Recovery Mechanism

- 7.1 Provide the amount of total annual revenues as of December 31, 2006, and provide a calculation of the total allowable EE&C costs based on 2% of that annual revenue amount.**

	Energy Consumption Forecast (MWh) 06/2009 - 05/2010		Annual 2006 Revenues (\$) <i>With ITC</i>	
Residential	7,231,347	35%	\$494,664,993	42%
Commercial	5,097,326	24%	\$293,832,582	25%
Industrial	8,557,651	41%	\$382,115,769	32%
Street Lighting	52,326	0%	\$7,516,761	1%
<b>Retail Billed MWh Sales</b>	<b>20,938,650</b>		<b>\$1,178,130,105</b>	

Consumption Reduction Targets (MWh)		
Year Ending May 31, 2011	209,387	1%
Year Ending May 31, 2013	628,160	3%

Peak Demand Reduction Target (MW)		
Year Ending May 31, 2013	157	4.5%

Annual Expenditure Cap	<i>With ITC</i>	
Residential	\$9,893,300	
Commercial	\$5,876,652	
Industrial	\$7,642,315	
Street Lighting	\$150,335	
	<b>\$23,562,602</b>	<b>2%</b>

- 7.2 Description of plan in accordance with 66 Pa. C.S. §§ 1307 and 2806.1 to fund the energy efficiency and conservation measures, to include administrative costs.**

For non-residential customers, Allegheny Power proposes to recover all program costs (respective to the allocation and cost structure described below in 7.5) via a separately stated non-bypassable line-item bill surcharge entitled EE&C Surcharge, which is provided in accordance with 66 Pa. C.S. §§ 1307 and 2806.1. For residential customers, EE&C program costs are recovered in addition to the currently approved distribution rates. The EE&C Surcharge is designed on a levelized basis over the 43-month period beginning November 2009 and running through May 31, 2013 for all customers except large commercial and industrial customers. The EE&C surcharge for large commercial and industrial customers is designed on a levelized basis over a 40-month period beginning February 2010 and running through May 31, 2013. Subject to the annual reconciliation mechanism described below, the implementation of a levelized surcharge helps mitigate the peaks and valleys that may otherwise occur if the surcharge had not been designed on a levelized basis.

Allegheny Power will submit to the Commission by March 31 of each year: (1) a comparison between forecasted revenues billed and actual revenues billed through

February, as adjusted for removal of gross receipts tax; (2) any adjustment to the forecasted revenues anticipated to be billed during March through May, as adjusted for removal of gross receipts tax; (3) any adjustment to the costs levelized over the 43-month period or 40-month period for large commercial and industrial customers) based upon actual costs incurred through February and any revised estimates for future months, up to the amount permitted to be recovered under Act 129; and (4) the subsequent reconciliation effect to the surcharge adjusted for gross receipts tax, and levelized over the period of the upcoming June 1 and continuing through the remaining months of the surcharge. A final reconciliation of amounts to be collected or refunded after May 31, 2013, through a further surcharge, should be authorized by the Commission. The purpose of this annual reconciliation mechanism is to mitigate the magnitude of the reconciliation balance. The EE&C Surcharge calculations in this filing are based upon Allegheny Power's annual reconciliation submitted to the Commission on March 31, 2010. Commission approval of this annual reconciliation mechanism to ensure dollar for dollar recovery of all prudently incurred costs through May 31, 2013, with a projected aggregated cost of \$94.24 million, will allow the Company to utilize regulatory accounting to properly match surcharge revenue with the program costs. Allegheny Power is requesting authorization for regulatory accounting to track on a dollar for dollar basis the amounts to be recovered on a deferred basis for any under-collections, or refunded on a deferred basis any over-collections, that may occur throughout the lifespan of the surcharge, which can arise because of the levelized nature of the surcharge.

### 7.3 Provide data tables (see Tables 6A, 6B, and 6C).

Table 6A: Portfolio-Specific Assignment of EE&C Costs

Residential Portfolio (including Low-Income)							
EE&C Program	Cost Elements (\$)						Totals
	Administration Costs	Marketing Costs	Outside Services Costs	Evaluation Costs	Customer Incentive Costs	Utility Capital Equipment Costs	
CFL Rewards Program	\$0	\$0	\$0	\$0	\$1,503,787	\$0	\$1,503,787
Critical Peak Rebate Rate Offering	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Energy Star Appliance Program	\$0	\$0	\$5,165,663	\$0	\$5,440,256	\$0	\$10,605,918
Home Performance Program	\$391,805	\$0	\$3,300,154	\$0	\$6,542,005	\$0	\$10,233,963
Low Income Home Performance Check-Up & Appliance Replacement Program	\$17,798	\$0	\$512,273	\$0	\$4,217,710	\$0	\$4,747,781
Low Income Joint Utility Usage Management Program	\$41,781	\$0	\$512,273	\$0	\$5,167,398	\$0	\$5,721,452
Low Income Room Air Conditioner Replacement Program	\$6,526	\$0	\$0	\$0	\$1,152,914	\$0	\$1,159,439
Programmable Controllable Thermostat Demand Response Program	\$0	\$0	\$0	\$0	\$906,988	\$0	\$906,988
Residential HVAC Efficiency Program	\$0	\$0	\$0	\$0	\$1,798,179	\$0	\$1,798,179
Residential Rewards - Pay Ahead Services Rate Offerings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
							\$0
<b>Totals</b>	<b>\$457,909</b>	<b>\$0</b>	<b>\$9,490,363</b>	<b>\$0</b>	<b>\$26,729,236</b>	<b>\$0</b>	<b>\$36,677,508</b>

Table 6A: Portfolio-Specific Assignment of EE&C Costs

Small Commercial/Industrial Portfolio							
EE&C Program	Cost Elements (\$)						Totals
	Administration Costs	Marketing Costs	Outside Services Costs	Evaluation Costs	Customer Incentive Costs	Utility Capital Equipment Costs	
Commercial HVAC Efficiency Program	\$0	\$0	\$0	\$0	\$928,884		\$928,884
Commercial Lighting Efficiency Program	\$0	\$0	\$0	\$0	\$10,834,735	\$0	\$10,834,735
Custom Commercial Program	\$0	\$0	\$537,613	\$0	\$2,681,390	\$0	\$3,219,003
Time of Use - Hourly Rate Offerings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
							\$0
<b>Totals</b>	<b>\$0</b>	<b>\$0</b>	<b>\$537,613</b>	<b>\$0</b>	<b>\$14,445,009</b>	<b>\$0</b>	<b>\$14,982,622</b>

Large Commercial/Industrial Portfolio							
EE&C Program	Cost Elements (\$)						Totals
	Administration Costs	Marketing Costs	Outside Services Costs	Evaluation Costs	Customer Incentive Costs	Utility Capital Equipment Costs	
Commercial & Industrial Custom Applications Program	\$0	\$0	\$413,736	\$0	\$4,939,000	\$0	\$5,352,736
Customer Load Response Program	\$685,134	\$0	\$0	\$0	\$1,133,105	\$0	\$1,818,239
Customer Resources for Demand Response	\$20,000	\$0	\$0	\$0	\$1,938,250	\$0	\$1,958,250
Distributed Generation Program	\$0	\$0	\$0	\$0	\$379,718	\$0	\$379,718
Variable Frequency Drives Program	\$0	\$0	\$0	\$0	\$2,139,528	\$0	\$2,139,528
							\$0
<b>Totals</b>	<b>\$705,134</b>	<b>\$0</b>	<b>\$413,736</b>	<b>\$0</b>	<b>\$10,529,601</b>	<b>\$0</b>	<b>\$11,648,471</b>

Table 6A: Portfolio-Specific Assignment of EE&C Costs

Governmental/Non-Profit Portfolio							
EE&C Program	Cost Elements (\$)						Totals
	Administration Costs	Marketing Costs	Outside Services Costs	Evaluation Costs	Customer Incentive Costs	Utility Capital Equipment Costs	
Governmental/Non-Profit Lighting Program	\$0	\$0	\$0	\$0	\$3,933,464	\$0	\$3,933,464
							\$0
<b>Totals</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,933,464</b>	<b>\$0</b>	<b>\$3,933,464</b>

**Table 6B: Allocation of Common Costs to Applicable Customer Sector**

Common Cost Element	Total Cost (\$)	Basis for Cost Allocation	Class Cost Allocation (\$)			
			Residential (Including Low-Income)	Commercial/Industrial -- Small	Commercial/Industrial -- Large	Governmental/Non-profit
<i>Administration Costs</i>	\$12,350,100	Energy usage, program level and measure share allocation	\$5,305,329	\$3,019,079	\$3,246,690	\$779,002
<i>Marketing Costs</i>	\$9,726,523	Program and measure level marketing plan	\$8,852,571	\$471,750	\$100,282	\$301,920
<i>Outside Services Costs</i>	\$637,560	Program requirements and participation levels	\$606,249	\$29,845	\$895	\$571
<i>Evaluation Costs</i>	\$4,280,266	Program level EMV plan	\$2,448,987	\$917,540	\$356,270	\$557,470
<i>Customer Incentive Costs</i>	\$0		\$0	\$0	\$0	\$0
<i>Utility Capital Equipment Costs</i>	\$0		\$0	\$0	\$0	\$0
<b>Totals</b>	\$26,994,449		\$17,213,136	\$4,438,213	\$3,704,138	\$1,638,962

**Table 6C: Summary of Portfolio EE&C Costs**

Portfolio	Total Sector Portfolio-specific Costs	Total Common Costs	Total of All Costs
Residential (Including Low-Income)	\$36,677,508	\$17,213,136	\$53,890,644
Commercial/Industrial -- Small	\$14,982,622	\$4,438,213	\$19,420,835
Commercial/Industrial -- Large	\$11,648,471	\$3,704,138	\$15,352,608
Governmental/Non-profit	\$3,933,464	\$1,638,962	\$5,572,427
<b>Totals</b>	\$67,242,065	\$26,994,449	\$94,236,514

**7.4 Provide and describe tariffs and a Section 1307 cost recovery mechanism. Provide all calculations and supporting cost documentation.**

Residential program costs are allocated entirely to Tariff No. 39 residential Rate Schedule 10, whereas commercial, industrial, government, school and non-profit program costs are allocated to the various Tariff No. 39 non-residential rate schedules and Tariff No. 37 based on the programs attributable to each rate schedule/tariff. This allocation is described more fully below in 7.5 and is done to align cost recovery with the customer class that will receive the direct energy and conservation benefits.

Following the appendices is a pro-forma tariff for Tariff No. 39 and Tariff No. 37 describing the proposed surcharge (which is provided in accordance with 66 Pa. C.S. §§ 1307 and 2806.1) and the calculations and supporting cost documentation.

Allegheny Power respectfully requests Commission approval to begin surcharge recovery effective on one day's notice on the portions of the plan the Commission has approved.

**7.5 Describe how the cost recovery mechanism will ensure that measures approved are financed by the same customer class that will receive the direct energy and conservation benefits.**

The various EE&C programs proposed by Allegheny Power have a target market of residential, commercial, industrial, government, school and/or non-profit customers. With the exception of the Tariff No. 39 residential customer class and Tariff No. 37, Allegheny Power does not have retail rate schedules available specifically for commercial, industrial, government, school or non-profit customers. Instead, Allegheny Power's Tariff No. 39 non-residential rate schedules are available based upon customer size (i.e., minimum monthly billing demand) and service voltage.

The Tariff No. 39 retail rate schedules can generally be grouped into the following customer classes:

- Residential
  - Schedule 10 - Residential rate schedule available to all residential service customers.
- Commercial
  - Schedule 20 - General Service rate schedule available to all non-residential customers, but designed for customers with a billing demand under 100 kW.
  - Schedule 22 - General Service rate schedule available to churches and schools. Schedule 22 was closed to new customers as of August 30, 1979.
- Commercial & Industrial

Schedule 30 - Mid-size commercial and industrial rate schedule available to customers with a billing demand of 100 kW or greater. This rate schedule consists of a very wide spectrum of customers since billing demands range from 100 kW to 2,000 kW. Due to such a wide spectrum of customers, a convenient delineation point is the 500 kW threshold established in the Retail Electric Default Service Program and Competitive Procurement Plan at Docket No. P-00072342. This delineation point separates Schedule 30 customers into those with a billed demand less than 500 kW and those with a billed demand of 500 kW or greater, and can also generally be used to group customers into a small commercial and industrial class and a large commercial and industrial class. As such, Schedule 30 customers with a billed demand less than 500 kW can be generally considered small commercial and industrial customers and are identified as “Schedule 30 (small)”; whereas Schedule 30 customers with a billed demand of 500 kW or greater can be generally considered large commercial and industrial customers and are identified as “Schedule 30 (large).”

- **Industrial**

Schedule 40 - Large industrial rate schedule available to customers with a billing demand of 2,000 kW or greater, with a service voltage of 25 kV or greater.

Schedule 41 - Large industrial rate schedule available to customers with a billing demand of 2,000 kW or greater, with a service voltage of 25 kV or greater. Schedule 41 was closed to new customers as of December 31, 1998.

Schedule 44 - Large interruptible industrial rate schedule available to customers with a billing demand of 5,000 kVA or greater, with a service voltage of 25 kV or greater. Schedule 44 was closed to new customers as of December 31, 1998.

Schedule 46 - Large industrial rate schedule available to customers with a billing demand of 30,000 kVA or greater, with a service voltage of 25 kV or greater. Schedule 46 was closed to new customers as of December 31, 1998.

- **Government/School/Non-Profit**

Government, school and non-profit customers are served on suitable non-residential rate schedules based on the size of their electrical load.

Tariff No. 37 provides service to Pennsylvania State University’s main campus at University Park in State College, Pennsylvania, and for the purposes of EE&C programs is classified similarly as Tariff No. 39 Schedule 30 (large).

Although not perfect, the above groupings of Tariff No. 39 rate schedules and Tariff No. 37 into various customer classes provides a better means to match EE&C programs with the customer class for which such programs are designed.

For non-residential customers, Allegheny Power proposes to collect the costs of EE&C programs through a separately stated non-bypassable line-item bill surcharge that will be specific to each designated Tariff No. 39 rate schedule and Tariff No. 37. For residential customers, EE&C program costs are recovered in addition to the currently approved distribution rates. The residential EE&C program allocation is straightforward since Allegheny Power has only one residential rate schedule, which means all residential EE&C programs are allocated to Tariff No. 39 Schedule 10.

With the exception of Tariff No. 37, the commercial, industrial, government, school, and non-profit EE&C program cost allocation is more complicated, since Allegheny Power does not have Tariff No. 39 rate schedules dedicated solely to one specific class of customer. However, to align cost recovery with the customer class that will receive the direct energy and conservation benefits, the allocation of the non-residential EE&C programs follow the same guidelines as the target market and the previously discussed rate schedule/tariff customer class groupings. A summary of the non-residential EE&C program cost allocation is provided below:

Non-Residential											
Tariff Classification	Commercial HVAC Efficiency Program	Lighting Efficiency Program	Governmental/Non-Profit Traffic Signals Measure	Custom Technology & Applications Program	Commercial and Industrial Drives Program	Custom Applications Program	Customer Load Response Program	Distributed Generation Program	Customer Resources Demand Response Program	Time of Use (TOU) with Critical Peak Pricing Rate	Hourly Pricing Option (HPO) Rate
Tariff No. 39, Schedule 20	X	X	X							X	X
Tariff No. 39, Schedule 22	X	X								X	X
Tariff No. 39, Schedule 30 (small)	X	X		X	X		X	X	X	X	X
Tariff No. 39, Schedule 30 (large)		X		X	X	X	X	X	X		
Tariff No. 39, Schedule 40					X	X	X	X	X		
Tariff No. 39, Schedule 41					X	X	X	X	X		
Tariff No. 39, Schedule 44					X	X	X	X	X		
Tariff No. 39, Schedule 46					X	X	X	X	X		
Tariff No. 37		X			X	X	X	X	X		

Although not all non-residential customers taking service under each rate schedule/tariff will participate in each and every program, the above allocation attributes programs to each of the various rate schedules/tariff where the customer(s) taking service are most likely to have an application that permits them to participate in the program. However, even if costs of a program are not presently allocated to a given rate schedule/tariff, that does not mean that customer(s) on the rate schedule/tariff are not eligible to participate. It just means that the number of participating customer(s) taking service under the rate schedules/tariff that have not been allocated costs is not assumed to be significant. However, should it be determined that the number of customers participating in a given program that has not been allocated costs becomes significant, a redesigned allocation methodology will be proposed so that EE&C Plan costs and benefits are best aligned. A brief description of the allocation methodology for each non-residential EE&C program is provided below:

- Commercial HVAC Efficiency Program. The Commercial HVAC Efficiency Program was allocated only to Schedules 20, 22 and 30 (small). Schedule 30 (large) and Tariff No. 37 would typically have HVAC beyond or not significantly within the scope of the target market. Schedules 40, 41, 44 and 46 customers are assumed to have very few, if any, air conditioning applications.
- Commercial and Government/Non-Profit Lighting Efficiency Program:
  - T8 and T5 Lighting. The T8 and T5 Lighting Efficiency Programs would typically be allocated only to Schedules 20, 22 and 30 (small). However, Allegheny Power wanted to recognize that Schedule 30 (large) and Tariff No. 37 would include customers with buildings and the potential to take advantage of such a program. Although Schedule 30 (large) and Tariff No. 37 customers have a larger electrical load requirement than Schedule 30 (small) customers, the larger electrical load requirement is not necessarily attributable to an increased lighting requirement but can instead be attributable to other factors such as additional motors, larger HVAC equipment, etc. Therefore, to recognize that Schedule 30 (large) and Tariff No. 37 customers could have the potential to take advantage of the T8 and T5 Lighting Efficiency Programs, a rate was designed so that these customers would pay, on average, an amount proportional on a demand basis to the same average monthly amount as Schedule 30 (small) customers. Schedules 40, 41, 44 and 46 customers are assumed to have an insignificant number of T8 and T5 lighting applications.
  - LED Exit Signs. Similar to the T8 and T5 Lighting Efficiency Programs, the LED Exit Signs Program would typically be allocated only to Schedules 20, 22 and 30 (small). However, Allegheny Power wanted to recognize that Schedule 30 (large) and Tariff No. 37 would include customers with buildings and the potential to take advantage of such a program. Using the same methodology previously discussed, a rate was designed so that these customers would pay, on average, an amount proportional on a demand basis to the same average monthly amount as Schedule 30 (small) customers. Schedules 40, 41, 44 and 46 customers are assumed to have an insignificant number of LED exit sign applications.
  - Occupancy Sensors. Similar to the LED Exit Signs Program, the Occupancy Sensor Program would typically be allocated only to Schedules 20, 22 and 30 (small). However, Allegheny Power wanted to recognize that Schedule 30 (large) and Tariff No. 37 would include customers with buildings and the potential to take advantage of such a program. Using the same methodology previously discussed, a rate was designed so that these customers would pay, on average, an amount proportional on a demand basis to the same average monthly amount as Schedule 30 (small) customers. Schedules 40, 41, 44 and 46 customers are assumed to have an insignificant number of occupancy sensor applications.



- LED Traffic Signals. General Service Schedule 20 is the only rate schedule grouping in which LED Traffic Signals would be applicable. Therefore, all LED Traffic Signal Program costs were allocated to Schedule 20.
- Custom Technology Applications Program. Since the Custom Technology Applications Program is designed for customers with usage between 1 million up to 2.5 million kWh's per year, the program costs were allocated to Schedules 30 (small) and 30 (large). Schedules 40, 41, 44, 46, and Tariff No. 37 customers are assumed to participate in the Custom Applications Program.
- Commercial and Industrial Drives Program. Since the Commercial and Industrial Drives Program is designed for customers with motors between 25 – 200 hp, the program costs were allocated to Schedules 30 (small), 30 (large), 40, 41, 44, 46, and Tariff No. 37. It is assumed that the number of eligible applications for the smaller Schedules 20 and 22 are not significant within the target market.
- Custom Applications Program. Since the Custom Applications Program is designed for Allegheny Power's 550 largest customers, the program costs were allocated to Schedules 30 (large), 40, 41, 44, 46, and Tariff No. 37.
- Customer Load Response Program. Since the Customer Load Response Program is designed for customers with a demand of at least 300 kW or greater, the program costs were allocated to Schedules 30 (small), 30 (large), 40, 41, 44 and 46, and Tariff No. 37.
- Customer Resources Demand Response Program. Since the Customer Resources Demand Response Program is designed for customers larger than 300 kW the program costs were allocated to Schedules 30 (small), 30 (large), 40, 41, 44 and 46, and Tariff No. 37.
- Distributed Generation Program. Since the Distributed Generation Program is designed for customers larger than 300 kW the program costs were allocated to Schedules 30 (small), 30 (large), 40, 41, 44 and 46, and Tariff No. 37.
- TOU and HPO Program. Since Schedules 30 (large), 40, 41, 44, 46, and Tariff No. 37 are already subject to hourly-pricing for default generation service, subject to the terms and conditions contained in the Company's Retail Electric Default Service Program and Competitive Procurement Plan at Docket No. P-00072342, the program costs for TOU and HPO Program plan management and reporting requirements were allocated to Schedules 20, 22 and 30 (small).

Once program costs are allocated to each rate schedule/tariff, cost recovery is accomplished via a per kilowatt-hour energy surcharge for Schedules 10, 20, and 22 since the majority of customers on these rate schedules presently do not have demand meters. Since all customers on Schedules 30 (small), 30 (large), 40, 41, 44, 46 and Tariff No. 37 have meters capable of recording demand, cost recovery for Schedule 30 (small) will be accomplished via a per kilowatt-hour energy surcharge and a per

kilowatt demand surcharge, and cost recovery for Schedule 30 (large), 40, 41, 44, 46 and Tariff No. 37 will be accomplished via a per kilowatt PJM peak load contribution. The EE&C program costs allocated to Schedule 30 (small) is separated into an energy-related portion and a demand-related portion, based upon the resultant load factor calculated from the energy and demand savings projections for each program.

The EE&C Surcharge is designed on a levelized basis over a 43-month period (or 40-month period for large commercial and industrial customers). Subject to the annual reconciliation mechanism described above in 7.2, the surcharge for each rate schedule/tariff is provided below:

Tariff Classification	\$ per kWh	\$ per kW	\$ per kW PLC
Tariff No. 39, Schedule 10	\$ 0.00233	\$ -	\$ -
Tariff No. 39, Schedule 20	\$ 0.00129	\$ -	\$ -
Tariff No. 39, Schedule 22	\$ 0.00108	\$ -	\$ -
Tariff No. 39, Schedule 30 (small)	\$ 0.00079	\$ 0.36	\$ -
Tariff No. 39, Schedule 30 (large)	\$ -	\$ -	\$ 0.59
Tariff No. 39, Schedule 40	\$ -	\$ -	\$ 0.31
Tariff No. 39, Schedule 41	\$ -	\$ -	\$ 0.31
Tariff No. 39, Schedule 44	\$ -	\$ -	\$ 0.31
Tariff No. 39, Schedule 46	\$ -	\$ -	\$ 0.31
Tariff No. 37	\$ -	\$ -	\$ 0.44

The EE&C Surcharge calculations in this filing are based upon Allegheny Power's annual reconciliation submitted to the Commission on March 31, 2010.

Allegheny Power projects its total program costs, including customer incentives, start-up costs and administrative costs, to be approximately \$94.24 million. Commission approval of the annual reconciliation mechanism (described above in 7.2) to ensure dollar for dollar recovery of all prudently incurred costs through May 31, 2013, with a projected aggregated cost of \$94.24 million, will allow the Company to utilize regulatory accounting to properly match surcharge revenue with the program costs. Allegheny Power is requesting authorization for regulatory accounting to track on a dollar for dollar basis the amounts to be recovered on a deferred basis for any under-collections, or refunded on a deferred basis any over-collections, that may occur throughout the lifespan of the surcharge, which can arise because of the levelized nature of the surcharge.

Customer bill impacts from the new surcharge will vary based upon customer consumption levels and the magnitude of default service generation rates. A range of customer total bill impacts averaged over the 43-month period (or 40-month period for large commercial and industrial customers), based upon average customer energy/demand consumption and assumed default service generation rates, is provided below:

Tariff Classification	Avg Total Bill Impact
Tariff No. 39, Schedule 10	2.4%
Tariff No. 39, Schedule 20	1.4%
Tariff No. 39, Schedule 22	1.0%
Tariff No. 39, Schedule 30 (small)	2.1%
Tariff No. 39, Schedule 30 (large)	1.5%
Tariff No. 39, Schedule 40	0.8%
Tariff No. 39, Schedule 41	0.8%
Tariff No. 39, Schedule 44	0.9%
Tariff No. 39, Schedule 46	0.6%
Tariff No. 37	1.5%

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## **8. Cost Effectiveness**

### **8.1 Explain and demonstrate how the proposed plan will be cost effective as defined by the Total Resource Cost Test (TRC) specified by the Commission.**

The Company performed TRC testing in accordance with the draft PA specific TRC test provided by Secretarial Letter on May 21, 2009. The Company reviewed the final PA specific TRC test order as adopted on June 18, 2009 and entered on June 23, 2009, and amended its filing on July 31, 2009 in accordance with changes to the TRC testing. The TRC testing completed as part of this filing were completed in accordance with the final PA specific TRC test order.

Allegheny Power supports the use of the TRC test in assessing the cost-effectiveness of the plan. The TRC test is the broadest in scope without including externalities. The TRC test includes the participants cost, the program administrator costs and the avoided supply costs and thus provides a basis of comparing both supply-side and demand-side options.

Evaluations were conducted at the individual measure basis and Allegheny Power focused on including those measures which were determined to be cost-effective as part of the plan. Allegheny Power did include some measures which were not determined to be cost-effective or were cost neutral in order to meet the requirements of the plan, and plans to evaluate the actual benefits/costs of measures and will consider or propose revisions be made to the plan during the annual review to ensure the Company meets its savings targets in a cost-effective manner.

### **8.2 Provide data tables (see Tables 7A thru 7E).**

The Company has projected the expected benefits and costs associated with the energy efficiency and conservation programs. The tables below summarize the expected benefits, and costs for the individual programs that the Company proposes to implement in the Plan. The Company has spent a considerable effort in the assumptions used in its cost-effectiveness models, such as participation rates, rebate levels, cost of equipment, savings, etc. The Company looks forward to obtaining actual program performance in order to improve both Program Design and Modeling.

Table 7A: TRC Benefits Table

Residential	TRC Benefits By Program Per Year (\$000)												
	Program	Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity		Energy		Load Reductions in kW		MWh Saved	
						Annual		Annual		Annual	Lifetime	Annual	Lifetime
						Generation	Trans/Dist	Peak	Off Peak				
<b>CFL Rewards Program</b>	1	-118,202	\$630,798	\$512,596	\$1,439	\$192,644	\$124,562	\$193,950	19	19	7,002	7,002	
	2	\$1,361,795	\$1,206,660	\$2,568,455	\$5,966	\$877,441	\$670,673	\$1,014,375	68	87	24,960	31,963	
	3	\$4,860,631	\$1,965,628	\$6,826,259	\$9,442	\$2,211,425	\$1,829,200	\$2,776,192	131	218	48,153	80,116	
	4	\$9,146,141	\$1,802,065	\$10,948,206	\$2,201	\$3,461,959	\$2,905,321	\$4,578,726	122	339	44,743	124,859	
	5	\$11,855,238	\$0	\$11,855,238	\$2,318	\$3,492,230	\$3,256,813	\$5,103,878	0	339	0	124,859	
	6	\$9,701,235	\$0	\$9,701,235	\$2,441	\$2,824,297	\$2,682,167	\$4,192,330	0	339	0	95,892	
	7	\$7,900,072	\$0	\$7,900,072	\$2,426	\$2,333,697	\$2,187,582	\$3,376,367	0	320	0	75,244	
	8	\$6,386,979	\$0	\$6,386,979	\$2,013	\$1,937,018	\$1,734,677	\$2,713,271	0	252	0	59,309	
	9	\$3,144,594	\$0	\$3,144,594	\$1,021	\$982,443	\$835,913	\$1,325,217	0	122	0	28,566	
<b>Critical Peak Rebate Rate Offering</b>	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
	2	-\$99,662	\$117,573	\$17,911	\$12,516	\$1,001	\$4,394	\$0	182	182	36	36	
	3	\$88,543	\$121,178	\$209,720	\$120,907	\$15,394	\$73,420	\$0	2,788	2,788	558	558	
	4	\$230,924	\$123,030	\$353,954	\$61,703	\$52,756	\$239,495	\$0	9,513	9,513	1,903	1,903	
<b>Energy Star Appliance Program</b>	1	-\$1,596,717	\$1,903,939	\$307,222	\$77,811	\$84,251	\$85,047	\$60,114	1,029	1,029	3,062	3,062	
	2	-\$3,833,809	\$5,343,409	\$1,509,600	\$333,359	\$390,877	\$465,040	\$320,323	3,825	4,854	11,176	14,239	
	3	-\$4,842,235	\$8,584,563	\$3,742,329	\$535,557	\$1,008,969	\$1,301,302	\$896,501	7,497	12,351	22,315	36,553	
	4	-\$2,436,478	\$7,867,034	\$5,430,556	\$129,028	\$1,635,929	\$2,122,353	\$1,543,245	7,542	19,894	22,448	59,001	
	5	\$6,691,404	-\$809,140	\$5,882,263	\$135,867	\$1,650,233	\$2,375,321	\$1,720,842	0	19,894	0	59,001	
	6	\$6,891,627	-\$827,155	\$6,064,472	\$139,114	\$1,681,557	\$2,471,602	\$1,772,199	0	19,344	0	57,093	
	7	\$6,385,393	-\$845,572	\$5,539,821	\$131,410	\$1,556,399	\$2,279,076	\$1,572,936	0	17,353	0	50,182	
	8	\$4,981,023	-\$864,398	\$4,116,624	\$106,431	\$1,184,811	\$1,707,898	\$1,117,484	0	13,347	0	36,277	
	9	\$3,486,371	-\$883,644	\$2,602,727	\$78,233	\$766,557	\$1,121,110	\$636,826	0	9,317	0	22,289	
	10	\$3,585,458	-\$903,318	\$2,682,141	\$82,380	\$807,215	\$1,147,162	\$645,384	0	9,317	0	22,289	
	11	\$3,603,223	-\$923,430	\$2,679,793	\$86,171	\$847,518	\$1,117,746	\$628,358	0	9,255	0	22,223	
	12	\$3,565,622	-\$894,922	\$2,670,700	\$86,231	\$849,294	\$1,113,013	\$622,162	0	8,796	0	21,148	
	13	\$3,081,144	-\$733,188	\$2,347,956	\$77,325	\$745,913	\$957,107	\$567,610	0	7,490	0	17,638	
	14	\$1,881,588	-\$375,877	\$1,505,711	\$56,710	\$484,443	\$560,289	\$404,269	0	5,217	0	10,878	
	15	\$585,859	\$0	\$585,859	\$35,771	\$191,822	\$148,951	\$209,315	0	3,125	0	4,090	
	16	\$260,254	\$0	\$260,254	\$27,955	\$133,424	\$42,213	\$56,663	0	2,319	0	2,702	
	17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	1,196	0	1,034	
	18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	600	0	519	
<b>Home Performance Program</b>	1	-\$1,621,820	\$1,775,163	\$153,343	\$16,662	\$51,512	\$33,307	\$51,862	220	220	1,872	1,872	
	2	-\$2,660,727	\$4,869,376	\$2,208,649	\$184,922	\$692,960	\$529,664	\$801,103	2,472	2,693	23,370	25,243	
	3	-\$3,092,223	\$7,032,716	\$3,940,493	\$206,641	\$1,211,289	\$1,001,929	\$1,520,635	3,507	4,766	32,704	43,883	
	4	-\$1,672,779	\$6,946,759	\$5,273,980	\$41,626	\$1,654,868	\$1,388,787	\$2,188,699	3,095	6,418	29,950	59,685	
	5	\$4,348,614	\$0	\$4,348,614	\$33,920	\$1,271,240	\$1,185,543	\$1,857,911	0	4,967	0	45,451	
	6	\$4,261,009	\$0	\$4,261,009	\$35,718	\$1,230,408	\$1,168,489	\$1,826,394	0	4,967	0	41,776	
	7	\$4,135,621	\$0	\$4,135,621	\$37,372	\$1,211,003	\$1,135,181	\$1,752,065	0	4,935	0	39,046	
	8	\$3,988,853	\$0	\$3,988,853	\$37,834	\$1,198,627	\$1,073,418	\$1,678,973	0	4,745	0	36,700	
	9	\$3,556,013	\$0	\$3,556,013	\$36,623	\$1,099,895	\$935,847	\$1,483,648	0	4,362	0	31,981	
	10	\$3,117,083	\$0	\$3,117,083	\$35,157	\$986,291	\$816,248	\$1,279,387	0	3,976	0	27,233	
	11	\$3,122,536	\$0	\$3,122,536	\$37,020	\$1,038,604	\$797,899	\$1,249,012	0	3,976	0	27,233	
	12	\$3,259,141	\$0	\$3,259,141	\$38,983	\$1,093,691	\$837,677	\$1,288,791	0	3,976	0	27,233	
	13	\$3,278,090	\$0	\$3,278,090	\$39,100	\$1,097,054	\$841,664	\$1,300,273	0	3,787	0	25,941	
	14	\$2,653,539	\$0	\$2,653,539	\$31,955	\$896,781	\$671,827	\$1,052,976	0	2,940	0	20,137	
	15	\$1,168,675	\$0	\$1,168,675	\$14,402	\$404,615	\$291,682	\$457,975	0	1,258	0	8,628	
<b>Programmable Controllable Thermostat Demand Response Program</b>	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
	2	-\$253,782	\$271,693	\$17,911	\$12,516	\$1,001	\$4,394	\$0	182	182	36	36	
	3	-\$51,048	\$260,769	\$209,720	\$120,907	\$15,394	\$73,420	\$0	2,788	2,788	558	558	
	4	\$131,113	\$222,841	\$353,954	\$61,703	\$52,756	\$239,495	\$0	9,513	9,513	1,903	1,903	
	5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
<b>Residential HVAC Efficiency Program</b>	1	-\$487,740	\$513,592	\$25,852	\$13,284	\$4,475	\$5,465	\$2,628	176	176	163	163	
	2	-\$957,938	\$1,140,341	\$182,403	\$84,882	\$31,420	\$45,111	\$20,990	1,060	1,236	982	1,145	
	3	-\$1,345,675	\$1,774,524	\$428,849	\$146,093	\$86,123	\$134,189	\$62,445	2,133	3,369	1,976	3,120	
	4	-\$1,205,869	\$1,708,543	\$502,674	\$35,772	\$141,613	\$213,260	\$112,028	2,146	5,515	1,987	5,107	
	5	\$542,515	\$0	\$542,515	\$37,668	\$142,852	\$236,933	\$125,062	0	5,515	0	5,107	
	6	\$577,326	\$0	\$577,326	\$39,665	\$150,428	\$254,746	\$132,487	0	5,515	0	5,107	
	7	\$597,342	\$0	\$597,342	\$41,767	\$158,407	\$264,031	\$133,137	0	5,515	0	5,107	
	8	\$611,682	\$0	\$611,682	\$43,981	\$166,809	\$264,854	\$136,039	0	5,515	0	5,107	
	9	\$625,525	\$0	\$625,525	\$46,312	\$175,656	\$264,946	\$138,610	0	5,515	0	5,107	
	10	\$641,477	\$0	\$641,477	\$48,766	\$184,973	\$266,518	\$141,220	0	5,515	0	5,107	
	11	\$643,913	\$0	\$643,913	\$51,351	\$194,784	\$260,066	\$137,712	0	5,515	0	5,107	
	12	\$686,875	\$0	\$686,875	\$54,072	\$205,115	\$284,898	\$142,790	0	5,515	0	5,107	
	13	\$718,445	\$0	\$718,445	\$56,879	\$214,411	\$296,605	\$150,551	0	5,510	0	5,070	
	14	\$719,636	\$0	\$719,636	\$59,515	\$215,717	\$296,675	\$147,728	0	5,475	0	4,844	
	15	\$655,416	\$0	\$655,416	\$59,925	\$199,958	\$266,762	\$128,771	0	5,235	0	4,264	
	16	\$200,537	\$0	\$200,537	\$49,891	\$150,646	\$0	\$0	0	4,139	0	3,051	
	17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	2,076	0	1,530	
<b>Residential Rewards - Pay Ahead Services Rate Offerings</b>	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
	2	-\$104,635	\$117,573	\$12,937	\$1,802	\$6,311	\$4,824	\$0	26	26	230	230	
	3	\$73,632	\$121,178	\$194,810	\$17,410	\$97,090	\$80,309	\$0	402	402	3,517	3,517	
	4	\$497,831	\$123,030	\$620,861	\$8,885	\$332,738	\$279,238	\$0	1,370	1,370	12,001	12,001	

Table 7B: TRC Benefits Table

Residential Low-Income		TRC Benefits By Program Per Year (\$000)										
Program	Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity		Energy		Load Reductions in kW		MWh Saved	
					Annual		Annual		Annual	Lifetime	Annual	Lifetime
					Generation	Trans/Dist	Peak	Off Peak				
Low Income Home Performance Check-Up & Appliance Replacement Program	1	-\$129,616	\$161,966	\$32,350	\$5,471	\$10,130	\$6,550	\$10,199	72	72	368	368
	2	-\$5,555	\$343,541	\$337,986	\$48,687	\$99,061	\$75,717	\$114,521	637	709	3,240	3,609
	3	\$195,314	\$263,786	\$459,100	\$41,780	\$135,382	\$111,982	\$169,956	255	964	1,296	4,905
	4	\$282,762	\$257,211	\$539,973	\$7,736	\$168,334	\$141,268	\$222,635	229	1,193	1,167	6,071
	5	\$584,480	\$0	\$584,480	\$8,146	\$169,806	\$158,359	\$248,170	0	1,193	0	6,071
	6	\$622,628	\$0	\$622,628	\$8,578	\$178,812	\$169,813	\$265,425	0	1,193	0	6,071
	7	\$607,064	\$0	\$607,064	\$8,485	\$176,876	\$165,802	\$255,902	0	1,120	0	5,703
	8	\$268,976	\$0	\$268,976	\$3,858	\$80,429	\$72,028	\$112,661	0	484	0	2,463
	9	\$130,295	\$0	\$130,295	\$1,924	\$40,119	\$34,135	\$54,116	0	229	0	1,167
Low Income Joint Utility Usage Management Program	1	-\$350,189	\$397,946	\$47,756	\$4,761	\$16,204	\$10,477	\$16,314	63	63	589	589
	2	-\$1,426,443	\$1,789,105	\$362,662	\$30,418	\$113,766	\$86,957	\$131,520	380	443	3,555	4,144
	3	-\$1,021,289	\$1,713,996	\$692,708	\$35,779	\$213,112	\$176,278	\$267,538	382	825	3,576	7,721
	4	-\$1,461,400	\$2,461,514	\$1,000,114	\$7,846	\$313,831	\$263,371	\$415,067	385	1,210	3,598	11,319
	5	\$1,082,743	\$0	\$1,082,743	\$8,262	\$316,575	\$295,234	\$462,672	0	1,210	0	11,319
	6	\$1,153,496	\$0	\$1,153,496	\$8,700	\$333,366	\$316,589	\$494,841	0	1,210	0	11,319
	7	\$1,197,167	\$0	\$1,197,167	\$9,161	\$351,047	\$329,068	\$507,891	0	1,210	0	11,319
	8	\$1,228,173	\$0	\$1,228,173	\$9,646	\$369,667	\$331,051	\$517,809	0	1,210	0	11,319
	9	\$1,255,736	\$0	\$1,255,736	\$10,158	\$389,273	\$331,214	\$525,091	0	1,210	0	11,319
	10	\$1,224,388	\$0	\$1,224,388	\$10,139	\$388,589	\$321,594	\$504,066	0	1,147	0	10,730
	11	\$820,003	\$0	\$820,003	\$7,139	\$273,615	\$210,203	\$329,046	0	767	0	7,174
	12	\$429,206	\$0	\$429,206	\$3,770	\$144,495	\$110,671	\$170,271	0	385	0	3,598
Low Income Room Air Conditioner Replacement Program	1	-\$106,905	\$110,008	\$3,103	\$1,421	\$591	\$778	\$314	19	19	21	21
	2	-\$161,487	\$183,451	\$21,964	\$9,014	\$4,116	\$6,361	\$2,472	112	131	128	150
	3	-\$114,021	\$149,926	\$35,906	\$10,493	\$7,631	\$12,808	\$4,973	111	242	127	276
	4	-\$97,681	\$136,926	\$39,245	\$2,277	\$11,120	\$17,764	\$8,085	109	351	125	401
	5	\$42,326	\$0	\$42,326	\$2,398	\$11,217	\$19,678	\$9,033	0	351	0	401
	6	\$45,025	\$0	\$45,025	\$2,525	\$11,812	\$21,176	\$9,513	0	351	0	401
	7	\$46,456	\$0	\$46,456	\$2,658	\$12,439	\$21,927	\$9,432	0	351	0	401
	8	\$47,523	\$0	\$47,523	\$2,799	\$13,098	\$21,974	\$9,651	0	351	0	401
	9	\$48,585	\$0	\$48,585	\$2,948	\$13,793	\$21,981	\$9,864	0	351	0	401
	10	\$49,695	\$0	\$49,695	\$3,104	\$14,525	\$21,978	\$10,089	0	351	0	401
	11	\$47,160	\$0	\$47,160	\$3,093	\$14,476	\$20,286	\$9,305	0	332	0	380
	12	\$33,549	\$0	\$33,549	\$2,155	\$10,084	\$14,909	\$6,402	0	220	0	251
	13	\$17,513	\$0	\$17,513	\$1,126	\$5,269	\$7,729	\$3,390	0	109	0	125

Table 7C: TRC Benefits Table

o Submit yearly projections for each program thru final year of that program for TRC evaluation.

Commercial/Industrial Small	TRC Benefits By Program Per Year (\$000)												
	Program	Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity		Energy		Load Reductions in kW		MWh Saved	
						Annual		Annual		Annual	Lifetime	Annual	Lifetime
						Generation	Trans/Dist	Peak	Off Peak				
<b>Commercial HVAC Efficiency Program</b>	1	-\$414,119	\$428,831	\$14,712	\$5,996	\$2,352	\$2,967	\$3,398	79	79	142	142	
	2	-\$596,068	\$703,537	\$107,470	\$38,506	\$16,572	\$24,814	\$27,578	482	561	860	1,001	
	3	-\$842,831	\$1,112,214	\$269,383	\$66,559	\$45,628	\$74,279	\$82,917	975	1,536	1,740	2,742	
	4	-\$754,362	\$1,115,067	\$360,705	\$16,351	\$75,385	\$124,114	\$144,855	986	2,522	1,761	4,503	
	5	\$392,976	\$0	\$392,976	\$17,218	\$75,873	\$138,749	\$161,136	0	2,522	0	4,503	
	6	\$418,992	\$0	\$418,992	\$18,131	\$79,899	\$148,790	\$172,171	0	2,522	0	4,503	
	7	\$434,259	\$0	\$434,259	\$19,092	\$84,139	\$154,621	\$176,408	0	2,522	0	4,503	
	8	\$444,188	\$0	\$444,188	\$20,103	\$88,604	\$155,580	\$179,900	0	2,522	0	4,503	
	9	\$452,402	\$0	\$452,402	\$21,169	\$93,306	\$155,538	\$182,389	0	2,522	0	4,503	
	10	\$464,460	\$0	\$464,460	\$22,291	\$98,257	\$159,103	\$184,808	0	2,522	0	4,503	
	11	\$463,074	\$0	\$463,074	\$23,472	\$103,472	\$155,616	\$180,514	0	2,522	0	4,503	
	12	\$483,915	\$0	\$483,915	\$24,716	\$108,962	\$163,866	\$186,370	0	2,522	0	4,503	
	13	\$502,630	\$0	\$502,630	\$25,887	\$112,796	\$169,832	\$194,115	0	2,508	0	4,426	
	14	\$470,151	\$0	\$470,151	\$26,366	\$106,320	\$156,342	\$181,123	0	2,426	0	3,962	
	15	\$372,215	\$0	\$372,215	\$25,862	\$85,402	\$120,700	\$140,251	0	2,260	0	3,022	
	16	\$181,599	\$0	\$181,599	\$24,413	\$59,691	\$46,051	\$51,444	0	2,026	0	2,006	
	17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	1,627	0	1,610	
	18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	818	0	810	
<b>Commercial Lighting Efficiency Program</b>	1	-\$2,010,555	\$2,646,095	\$635,540	\$138,541	\$135,611	\$141,415	\$219,972	1,833	1,833	8,166	8,166	
	2	-\$9,985,835	\$15,812,266	\$5,826,431	\$923,237	\$1,038,048	\$1,285,207	\$1,940,386	11,615	13,447	54,561	62,726	
	3	-\$8,185,337	\$27,010,814	\$18,825,477	\$1,506,783	\$2,615,500	\$3,520,780	\$5,340,117	21,314	34,762	94,431	157,157	
	4	\$14,589,011	\$14,603,952	\$29,192,963	\$276,863	\$3,401,082	\$4,646,765	\$7,324,143	7,939	42,701	45,991	203,148	
	5	\$38,065,313	\$0	\$38,065,313	\$291,536	\$3,423,113	\$5,198,190	\$8,147,530	0	42,701	0	203,148	
	6	\$39,669,922	\$0	\$39,669,922	\$306,988	\$3,604,762	\$5,573,439	\$8,712,120	0	42,701	0	203,148	
	7	\$40,803,791	\$0	\$40,803,791	\$323,258	\$3,796,051	\$5,792,816	\$8,940,974	0	42,701	0	203,148	
	8	\$41,723,962	\$0	\$41,723,962	\$340,391	\$3,997,491	\$5,829,968	\$9,116,695	0	42,701	0	203,148	
	9	\$42,574,446	\$0	\$42,574,446	\$358,432	\$4,209,620	\$5,828,302	\$9,239,069	0	42,701	0	203,148	
	10	\$43,586,551	\$0	\$43,586,551	\$377,428	\$4,433,007	\$5,968,868	\$9,357,498	0	42,701	0	203,148	
	11	\$44,016,876	\$0	\$44,016,876	\$397,432	\$4,668,247	\$5,838,580	\$9,140,765	0	42,701	0	203,148	
	12	\$45,405,210	\$0	\$45,405,210	\$418,496	\$4,915,971	\$6,131,476	\$9,433,691	0	42,701	0	203,148	
	13	\$47,128,459	\$0	\$47,128,459	\$440,676	\$5,176,841	\$6,467,674	\$9,992,084	0	42,701	0	203,148	
	14	\$48,590,435	\$0	\$48,590,435	\$464,032	\$5,451,554	\$6,648,060	\$10,417,849	0	42,701	0	203,148	
	15	\$49,715,403	\$0	\$49,715,403	\$488,626	\$5,740,845	\$6,733,718	\$10,573,100	0	42,701	0	203,148	
	16	\$42,855,187	\$0	\$42,855,187	\$492,442	\$5,802,487	\$3,904,643	\$5,893,634	0	40,868	0	194,983	
	17	\$26,467,958	\$0	\$26,467,958	\$0	\$0	\$0	\$0	0	29,253	0	140,422	
	18	\$19,838,003	\$0	\$19,838,003	\$0	\$0	\$0	\$0	0	7,939	0	45,991	
	19	\$9,744,422	\$0	\$9,744,422	\$0	\$0	\$0	\$0	0	0	0	0	
<b>Custom Commercial Program</b>	1	-\$342,807	\$342,807	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
	2	-\$150,071	\$344,848	\$194,777	\$40,776	\$37,497	\$46,407	\$70,097	594	594	2,266	2,266	
	3	\$133,652	\$333,950	\$467,603	\$62,964	\$92,225	\$124,095	\$188,319	859	1,453	3,276	5,542	
	4	\$325,206	\$334,293	\$659,499	\$14,489	\$142,725	\$194,980	\$307,305	782	2,235	2,984	8,525	
	5	\$718,895	\$0	\$718,895	\$15,257	\$143,650	\$218,136	\$341,853	0	2,235	0	8,525	
	6	\$766,792	\$0	\$766,792	\$16,065	\$151,273	\$233,878	\$365,576	0	2,235	0	8,525	
	7	\$794,558	\$0	\$794,558	\$16,917	\$159,300	\$243,088	\$375,253	0	2,235	0	8,525	
	8	\$812,842	\$0	\$812,842	\$17,814	\$167,753	\$244,653	\$382,622	0	2,235	0	8,525	
	9	\$827,734	\$0	\$827,734	\$18,758	\$176,655	\$244,583	\$387,739	0	2,235	0	8,525	
	10	\$848,986	\$0	\$848,986	\$19,752	\$186,029	\$250,517	\$392,688	0	2,235	0	8,525	
	11	\$845,348	\$0	\$845,348	\$20,799	\$195,901	\$245,052	\$383,596	0	2,235	0	8,525	
	12	\$881,328	\$0	\$881,328	\$21,901	\$206,297	\$257,260	\$395,870	0	2,235	0	8,525	
	13	\$930,973	\$0	\$930,973	\$23,062	\$217,244	\$271,382	\$419,285	0	2,235	0	8,525	
	14	\$969,149	\$0	\$969,149	\$24,284	\$228,772	\$278,932	\$437,160	0	2,235	0	8,525	
	15	\$992,697	\$0	\$992,697	\$25,571	\$240,912	\$282,552	\$443,661	0	2,235	0	8,525	
	16	\$711,544	\$0	\$711,544	\$26,926	\$253,697	\$171,723	\$259,197	0	2,235	0	8,525	
	17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	1,641	0	6,259	
	18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	782	0	2,984	
<b>Time of Use - Hourly Rate Offerings</b>	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
	2	-\$126,174	\$167,561	\$41,388	\$8,542	\$4,019	\$28,826	\$0	124	124	243	243	
	3	\$196,398	\$172,300	\$368,698	\$48,539	\$36,378	\$283,780	\$0	1,120	1,120	2,186	2,186	
	4	\$767,754	\$175,312	\$943,066	\$21,782	\$109,786	\$811,498	\$0	3,359	3,359	6,558	6,558	



Table 7D: TRC Benefits Table

o Submit yearly projections for each program thru final year of that program for TRC evaluation.

Commercial/Industrial Large		TRC Benefits By Program Per Year (\$000)												
		Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity Annual		Energy Annual		Load Reductions		MWh Saved		
						Generation	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime	
Commercial & Industrial Custom Applications Program		1	-\$340,523	\$340,523	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0
		2	\$995,499	\$294,153	\$1,289,653	\$242,221	\$157,147	\$354,090	\$536,195	3,638	3,638	18,522	18,522	
		3	\$3,148,014	\$199,917	\$3,347,931	\$397,615	\$412,992	\$1,005,875	\$1,531,448	5,822	9,460	29,635	48,157	
		4	\$3,719,956	\$196,067	\$3,916,023	\$74,144	\$521,780	\$1,288,370	\$2,031,728	2,333	11,793	11,958	60,115	
		5	\$4,290,064	\$0	\$4,290,064	\$78,074	\$528,288	\$1,434,850	\$2,248,852	0	11,793	0	60,115	
		6	\$4,577,704	\$0	\$4,577,704	\$82,212	\$556,351	\$1,536,967	\$2,402,173	0	11,793	0	60,115	
		7	\$4,739,984	\$0	\$4,739,984	\$86,569	\$585,906	\$1,598,936	\$2,468,573	0	11,793	0	60,115	
		8	\$4,833,353	\$0	\$4,833,353	\$91,157	\$617,031	\$1,608,618	\$2,516,548	0	11,793	0	60,115	
		9	\$4,902,629	\$0	\$4,902,629	\$95,989	\$649,808	\$1,607,371	\$2,549,461	0	11,793	0	60,115	
		10	\$5,010,784	\$0	\$5,010,784	\$101,076	\$684,328	\$1,645,404	\$2,579,976	0	11,793	0	60,115	
		11	\$4,958,212	\$0	\$4,958,212	\$106,433	\$720,681	\$1,610,255	\$2,520,843	0	11,793	0	60,115	
		12	\$5,159,918	\$0	\$5,159,918	\$112,074	\$758,965	\$1,689,246	\$2,599,633	0	11,793	0	60,115	
		13	\$5,447,901	\$0	\$5,447,901	\$118,014	\$799,283	\$1,780,332	\$2,750,272	0	11,793	0	60,115	
		14	\$5,661,040	\$0	\$5,661,040	\$124,269	\$841,742	\$1,828,432	\$2,866,596	0	11,793	0	60,115	
		15	\$5,773,820	\$0	\$5,773,820	\$130,855	\$886,458	\$1,850,168	\$2,906,339	0	11,793	0	60,115	
		16	\$3,905,588	\$0	\$3,905,588	\$137,790	\$933,548	\$1,129,410	\$1,704,840	0	11,793	0	60,115	
		17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	8,155	0	41,593	
		18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	2,333	0	11,958	
Customer Load Response Program		1	-\$257,667	\$257,667	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
		2	\$725,356	\$367,025	\$1,092,382	\$998,574	\$6,363	\$87,444	\$0	15,000	15,000	750	750	
		3	\$836,032	\$580,339	\$1,416,371	\$1,218,892	\$12,435	\$185,044	\$0	29,000	29,000	1,450	1,450	
		4	-\$738,201	\$1,301,799	\$563,598	\$182,324	\$25,171	\$356,103	\$0	29,000	29,000	2,900	2,900	
Customer Resources for Demand Response		1	-\$257,667	\$257,667	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
		2	\$1,538,140	\$282,496	\$1,820,636	\$1,664,291	\$10,605	\$145,740	\$0	25,000	25,000	1,250	1,250	
		3	\$1,372,515	\$581,101	\$1,953,615	\$1,681,231	\$17,152	\$255,233	\$0	40,000	40,000	2,000	2,000	
		4	-\$914,053	\$1,691,430	\$777,377	\$251,482	\$34,719	\$491,176	\$0	40,000	40,000	4,000	4,000	
Distributed Generation Program		1	-\$51,533	\$51,533	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
		2	\$120,272	\$169,281	\$289,553	\$266,287	\$1,697	\$21,569	\$0	4,000	4,000	200	200	
		3	\$81,872	\$256,661	\$338,533	\$294,215	\$3,002	\$41,316	\$0	7,000	7,000	350	350	
		4	-\$302,893	\$432,487	\$129,594	\$44,009	\$6,076	\$79,509	\$0	7,000	7,000	700	700	
Variable Frequency Drives Program		1	-\$468,775	\$495,518	\$26,744	\$5,783	\$3,404	\$12,717	\$4,841	79	79	399	399	
		2	-\$965,025	\$1,168,935	\$203,909	\$36,763	\$23,687	\$104,721	\$38,739	473	552	2,393	2,792	
		3	-\$1,547,597	\$2,101,581	\$553,984	\$63,000	\$64,987	\$310,459	\$115,538	947	1,499	4,786	7,578	
		4	-\$1,352,592	\$2,199,359	\$846,767	\$15,375	\$107,314	\$525,661	\$198,417	947	2,446	4,786	12,364	
		5	\$771,572	\$159,116	\$930,688	\$16,190	\$108,652	\$586,367	\$219,479	0	2,446	0	12,364	
		6	\$831,460	\$162,658	\$994,118	\$17,048	\$114,424	\$627,601	\$235,045	0	2,446	0	12,364	
		7	\$868,485	\$166,280	\$1,034,765	\$17,952	\$120,503	\$653,355	\$242,955	0	2,446	0	12,364	
		8	\$881,156	\$169,982	\$1,051,138	\$18,903	\$126,904	\$657,786	\$247,544	0	2,446	0	12,364	
		9	\$887,527	\$173,767	\$1,061,294	\$19,905	\$133,645	\$657,297	\$250,446	0	2,446	0	12,364	
		10	\$912,684	\$177,635	\$1,090,319	\$20,960	\$140,745	\$675,595	\$253,019	0	2,446	0	12,364	
		11	\$897,292	\$181,590	\$1,078,882	\$22,071	\$148,222	\$661,317	\$247,272	0	2,446	0	12,364	
		12	\$935,400	\$185,633	\$1,121,033	\$23,241	\$156,095	\$687,055	\$254,641	0	2,446	0	12,364	
		13	\$993,479	\$189,767	\$1,183,246	\$24,473	\$164,388	\$725,340	\$269,046	0	2,446	0	12,364	
		14	\$1,029,028	\$193,992	\$1,223,020	\$25,770	\$173,120	\$743,503	\$280,627	0	2,446	0	12,364	
		15	\$1,049,638	\$198,311	\$1,247,949	\$27,136	\$182,317	\$754,279	\$284,217	0	2,446	0	12,364	
		16	\$727,752	\$196,187	\$923,939	\$27,652	\$185,808	\$521,654	\$188,825	0	2,367	0	11,965	
		17	-\$160,444	\$160,444	\$0	\$0	\$0	\$0	\$0	0	1,893	0	9,572	
		18	-\$82,008	\$82,008	\$0	\$0	\$0	\$0	\$0	0	947	0	4,786	

Table 7E: TRC Benefits Table

Governmental/Non-Profit		TRC Benefits By Program Per Year (\$000)											
		Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity Annual		Energy Annual		Load Reductions in kW		MWh Saved	
						Generation	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime
Governmental/Non-Profit Lighting Program		1	-\$328,455	\$520,700	\$192,245	\$19,292	\$47,197	\$49,196	\$76,560	255	255	2,842	2,842
		2	-\$336,589	\$3,263,031	\$2,926,442	\$208,893	\$643,794	\$796,781	\$1,203,518	2,787	3,043	36,061	38,903
		3	\$3,631,499	\$3,040,222	\$6,671,721	\$251,267	\$957,256	\$1,288,050	\$1,954,664	2,754	5,797	18,616	57,519
		4	\$5,547,345	\$2,538,441	\$8,085,785	\$51,623	\$1,071,437	\$1,463,712	\$2,306,937	2,195	7,962	8,416	63,997
		5	\$7,103,542	\$0	\$7,103,542	\$51,869	\$682,081	\$1,035,757	\$1,623,197	0	7,597	0	40,479
		6	\$6,712,960	\$0	\$6,712,960	\$53,734	\$577,498	\$892,851	\$1,395,623	0	7,474	0	32,545
		7	\$6,903,015	\$0	\$6,903,015	\$56,581	\$608,143	\$928,013	\$1,432,567	0	7,474	0	32,545
		8	\$7,058,726	\$0	\$7,058,726	\$59,580	\$640,415	\$933,989	\$1,460,697	0	7,474	0	32,545
		9	\$7,203,391	\$0	\$7,203,391	\$62,738	\$674,399	\$933,720	\$1,480,231	0	7,474	0	32,545
		10	\$7,374,276	\$0	\$7,374,276	\$66,063	\$710,186	\$956,376	\$1,499,124	0	7,474	0	32,545
		11	\$7,452,123	\$0	\$7,452,123	\$69,565	\$747,873	\$935,510	\$1,464,417	0	7,474	0	32,545
		12	\$7,683,246	\$0	\$7,683,246	\$73,251	\$787,559	\$982,116	\$1,511,275	0	7,474	0	32,545
		13	\$7,968,606	\$0	\$7,968,606	\$77,134	\$829,352	\$1,036,029	\$1,600,663	0	7,474	0	32,545
		14	\$8,212,297	\$0	\$8,212,297	\$81,222	\$873,362	\$1,064,852	\$1,668,903	0	7,474	0	32,545
		15	\$8,402,308	\$0	\$8,402,308	\$85,527	\$919,707	\$1,078,671	\$1,693,719	0	7,474	0	32,545
		16	\$7,355,892	\$0	\$7,355,892	\$87,346	\$941,572	\$637,335	\$961,988	0	7,249	0	31,640
		17	\$4,730,704	\$0	\$4,730,704	\$0	\$0	\$0	\$0	0	4,826	0	19,098
		18	\$1,850,945	\$0	\$1,850,945	\$0	\$0	\$0	\$0	0	2,195	0	8,416
		19	\$609,077	\$0	\$609,077	\$0	\$0	\$0	\$0	0	0	0	0

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## 9. Plan Compliance Information and Other Key Issues

### 9.1 Plan Compliance Issues

#### 9.1.1. Describe how the plan provides a variety of energy efficiency, conservation, and load management measures and will provide the measures equitably to all classes of customers in accordance with the January 15 Implementation Order.

Allegheny Power has developed a portfolio of programs that target major energy consuming appliances, systems, and processes by customer sector. This provides the best opportunity for all customers to participate in a program as well as for the Company to meet its goals under Act 129. Table 2 illustrates the energy and demand savings and Table 3 illustrates the annual budget to provide the Company's programs to all classes of customers. Table 4 provides the Program level energy and demand savings. In addition, the Company has developed specific programs to target specific customer sectors; i.e., low income and government/non-profit that further supports Act 129 requirements regarding these customer sectors as illustrated by Table 5, the Parity Analysis of providing programs to all customer sectors.

#### 9.1.2. Provide statement delineating the manner in which the EE&C plan will achieve the requirements of the program under 66 Pa. C.S. §§ 2806.1(c) & 2806.1(d).

Section 2806.1(c) provides the EDC consumption reduction requirements of one percent by mid 2011 and three percent by mid 2013. Section 2806.1(d) sets a 4.5% reduction in annual system peak by mid 2013. Allegheny Power's anticipated programs for meeting the reductions of consumption and peak demand are fully described in Section 3 of the Plan. A summation of the programs' anticipated contribution, as a percentage of total target reductions for consumption and peak demand, is provided in Table 2.

#### 9.1.3. Provide statement delineating the manner in which the EE&C plan will achieve the Low-Income requirements under 66 Pa. C.S. §§ 2806.1(b)(1)(i)(G).

Section 2806.1 (b) (1) (i) (G) provides that the Plan shall include specific energy efficiency measures for households at or below 150% of the Federal Poverty Income Guidelines, and that a proportionate number of measures be provided relative to the share of the total energy use for these customers. Allegheny Power has developed three programs for these households to specifically participate, in addition to the Residential programs. Both the budget provided to these programs and the savings achieved from this customer sector is relative. A summation of the programs' anticipated results specific to this customer sector is provided in Tables 1, 2 and 5.

**9.1.4. Provide statement delineating the manner in which the EE&C plan will achieve the Government/Non-Profit requirements under 66 Pa. C.S. §§ 2806.1(b)(1)(i)(B).**

Section 2806.1(b)(1)(i)(B) provides that at least 10% of the energy consumption savings be achieved from the Government/Non-Profit customer sector. Allegheny Power has targeted a program for this customer sector, in addition to the other Commercial and Industrial programs, to ensure this requirement is met. A summation of the programs' anticipated results specific to this customer sector is provided in Table 2.

**9.1.5. Describe how EDC will ensure that no more than two percent of funds available to implement the plan shall be allocated for experimental equipment or devices.**

Allegheny Power has developed two programs which can be utilized for new technologies including experimental equipment or devices, including the Custom Technology Applications Program and the Custom Applications Program. Allegheny Power will evaluate all projects submitted under these programs for selection of the programs and measures to provide incentive, and will manage these programs to limit any funding provided for experimental equipment or devices to no more than two percent.

**9.1.6. Describe how the plan will be competitively neutral to all distribution customers even if they are receiving supply from an EGS.**

All EE&C and DR programs included in the plan were developed without any consideration given to the status of the customer receiving supply from an EGS. Any customer can participate in any EE&C and DR program and no provisions of these programs limit or restrict the customer's ability to receive supply from an EGS. Allegheny Power is proposing several rate options for customers that may not be applicable to a customer receiving supply from an EGS.

## **9.2 Other Key Issues**

**9.2.1. Describe how this EE&C plan will lead to long-term, sustainable energy efficiency savings in the EDCs service territory and in Pennsylvania.**

Allegheny Power believes its plan will drive long-term sustainable energy efficiency savings among customers for key reasons as follows:

Allegheny Power's portfolio of energy efficiency and conservation, and demand response programs enable all customers to participate in one or more programs. Programs were selected to target the major energy-consuming systems, which are heating, HVAC, major consumer appliances and lighting, with a sufficiently broad scope to provide an opportunity for all Pennsylvania customers to participate. Programs were also selected to target each customer class. Long-

term sustainability is supported by having the most customers and customer classes actively participating in an energy efficiency and conservation, and demand response programs.

The design of the proposed programs is to provide incentives to customers to install more efficient end-use devices. With rebate programs in place, vendors will increase their stock of high-efficiency appliances, or no longer stock standard efficiency appliances (which is reported to have resulted from rebate programs in California) and customers more consistently choose high-efficiency appliances, thus leading to increased energy efficiency.

Understanding that changing customer behavior is the ultimate objective, the logical progression is to first focus on the deployment of more efficient equipment via the incentive programs and then shift the focus to the manner in which it is operated by facilitating interactive customer participation. Program offerings will expand from targeting equipment efficiency to targeting more efficient equipment operation and energy usage, with the implementation of smart meter infrastructure that will provide customers with more real-time information that will enable customers not only to understand the consequences of their energy decisions, but to react to them in real-time. In addition, new rate offerings are proposed to provide incentive and support long term energy efficient behavior among customers.

**9.2.2. Describe how this EE&C plan, and the EDC, will avoid possible overlaps between programs offered in different Pennsylvania EDC service territories as well as possibly programs offered in neighboring states.**

Allegheny Power conducted program design in coordination with input received from various stakeholders, including State agencies and other utilities. Allegheny Power conducted twelve stakeholder and working group meetings throughout the program development process to solicit stakeholder input and feedback regarding the development of the Company's Plan. The stakeholder process also included numerous informal meetings and discussions which provided the Company with valuable input on the proposed programs.

In addition, Allegheny Power completed benchmarking studies in an effort to ensure the reasonableness/viability of its program proposals. In doing so, numerous utilities were contacted to ascertain the parameters of the programs offered and the relative success of those program offerings. This permitted Allegheny Power to design its programs in consideration of programs offered elsewhere in the State or region to minimize customer confusion as much as possible.

Allegheny Power has contacted other PA EDCs to discuss common programs in order to establish common program elements, including incentive levels, where possible. The Company fully supports working with other utilities in establishing common equipment eligibility requirements and incentive levels, to the extent

possible, to avoid conflict or overlap between similar programs. Allegheny has also leveraged its EE&C programs in Maryland as much as possible and strived to maintain program consistency including eligible equipment and incentive levels with both other PA EDCs and the Company's programs in Maryland.

**9.2.3. Describe how this EE&C plan will leverage and utilize other financial resources, including funds from other public and private sector energy efficiency and solar energy programs.**

Allegheny Power fully intends to leverage and utilize available funding resources to the extent possible in the delivery of this plan. At this time, the Joint Utility Usage Management Program services will primarily be provided through state agencies that have access to the American Recovery and Reinvestment Act (ARRA) funding through which stimulus dollars have been designated for program services for energy reduction for low-moderate income customers. Allegheny Power will continue to explore additional funding under the Act or from other resources to promote, enhance or expand services to customers.

**9.2.4. Describe how the EDC will address consumer education on energy efficiency, conservation, solar and solar photovoltaic systems, and geothermal heating, and other measures.**

***Background***

Education has proven to be a valuable component of energy-efficiency programs and experience has shown that energy-efficiency programs increase energy savings and enhance the persistence of savings. Education causes the customer to be more committed to the program and gives the customer control over energy usage and savings. Customer education and awareness is essential for the successful implementation of these proposed energy-efficiency and conservation programs. A successful awareness campaign activates the participant base required for these programs to achieve the Act 129 goals.

The Plan will leverage the on-going Pennsylvania Consumer Education Program, which is designed to educate customers that electric rates are increasing and the steps they can take to use less energy and manage their bills.

***Allegheny Power's Corporate Messages***

- Allegheny Power is committed to minimizing the environmental impact of its operations and, along with its employees, will promote energy conservation and efficiency.
- Allegheny Power is committed to helping its customers make smart energy choices and Watt Watchers is Allegheny Power's program to help customers learn more about saving energy and money.
- In implementing Act 129 the Company will develop new energy conservation programs and information to help customers manage their electric bill and use energy more efficiently.

Allegheny Power is actively engaged in new technologies, such as smart grid initiatives and advanced meters. The Plan will leverage the on-going Pennsylvania Consumer Education Program,<sup>112</sup> which is designed to educate customers that electric rates are increasing and steps they can take to use less energy and manage their bills.

Allegheny Power's customer education plan is designed to meet the mandated energy reductions set forth in the Act by informing customers and successfully deploying programs and technology to increase conservation while relying on customer acceptance and willingness to change their energy usage behavior.

This plan recognizes that meeting the requirements of Act 129 will require an evolving strategy that will change over time. The plan will remain flexible in its key messages and tactics to continually evolve to support a developing strategy.

Allegheny Power will integrate its Act 129 awareness campaign with its ongoing Consumer Education Plan which is designed to educate customers that rates are increasing and that there are steps they can take to use less energy and manage their bills. The combined plan will be known as the Pennsylvania Watt Watchers Energy Efficiency and Conservation Campaign.

The combined plan will incorporate a general awareness campaign and program-specific campaigns, and will build upon the messages delivered by the Company's Consumer Education Plan. Together, the two Act 129 plan components will:

- Build awareness of Allegheny Power's consumption and demand reduction efforts;
- Position the Allegheny Power brand as a leader in energy conservation, awareness and efficiency; and
- Transform Allegheny Power's relationship with its customers from one of a highly reliable supplier of energy to a partner in energy conservation and environmental stewardship.

### ***Pennsylvania Watt Watchers Energy Efficiency & Conservation Campaign***

#### ***Overview***

Allegheny Power's Act 129 general awareness campaign is focused on educating customers about the benefits of energy efficiency and conservation, and influencing customers to make decisions that reduce their energy consumption.

The Company's plan assumes the following definitions:

- Energy Efficiency & Conservation - focused investment for consumption reduction by Allegheny Power and/or customer; and
- Demand Response - enables and rewards changing customer behavior through meters and dynamic rates & tariffs.

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<sup>112</sup> The Pennsylvania Consumer Education Plan funding is not included within this filing or cost recovery request.

The Pennsylvania Watt Watchers Energy Efficiency & Conservation Campaign provides Allegheny Power's customers with education and information regarding the benefits of energy-efficiency and conservation. This program is the vehicle to educate customers regarding the benefits of energy-efficiency and conservation as well as inform them of opportunities to reduce their electricity bills through EE&C activities.

To meet the mandated reductions specified in Act 129, customers must be educated to make informed choices about participation in programs that will not only meet their energy needs, but also have the added benefits of reducing their energy costs and protecting the environment. Through a combination of educational and promotional messaging throughout the duration of this program, the Pennsylvania Watt Watchers Energy Efficiency & Conservation Campaign will employ the AIDA model<sup>113</sup> to focus key communications and marketing campaigns. The basic four steps of the process include:

- Increasing market awareness of energy efficiency and conservation, and brand of Allegheny Power;
- Generating stakeholder interest by communicating the value proposition of the programs;
- Creating desire for conservation and demand response; and
- Crafting actionable opportunities that encourage adoption and purchase.

Allegheny Power's plan will integrate a general awareness campaign along with program-specific campaigns. The objectives for the Pennsylvania Watt Watchers Energy Efficiency & Conservation Campaign are to:

- Educate all classes of Allegheny Power customers about opportunities to reduce their electric bills through energy efficiency, conservation, and demand response programs as well as to educate customers on the no and low cost actions they can take;
- Motivate customers to participate in one or more of the new programs offered to reduce energy consumption;
- Demonstrate how participation in one or more of the new programs can offset the cost of the monthly surcharge;
- Assist customer understanding of the benefits of these programs to the environment and to securing a reliable energy future; and
- Provide clear, easily understood information so that customers can make informed energy decisions.

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<sup>113</sup> Attention, Interest, Desire, Action. This is a traditional model of the purpose and flow of marketing communications and direct sales efforts.



***Program Implementation—Marketing Plan***

The Pennsylvania Watt Watchers Energy Efficiency & Conservation Campaign began in the first quarter of 2010. The first partial program year will end in May 2010. Three full-year programs beginning June 1 and ending on May 31 will follow. The last program year ends May 31, 2013. The communication plan outlines key messages, branding and visual identity considerations, stakeholder needs, and planned communications events and activities. The plan will be shaped by the knowledge and feedback obtained through a series of customer and stakeholder meetings. Communications tactics will include a variety of media that will address various areas of the Company's residential and non-residential customer base including low-income and hard-to-reach customers. To be effective, the program will use consistent design techniques across all media elements. Message delivery platforms will include newspaper and radio advertisements, bill inserts and bill messages, attendance at special events, distribution of information during trade shows, conventions or any other special events held in Allegheny Power's Pennsylvania service territory, press releases, websites, customer training and personal contacts. The Pennsylvania Watt Watchers Energy Efficiency & Conservation Campaign is designed to be flexible to the changing needs of the program requirements and the customers' response to the campaign. Education efforts are anticipated to continue through the length of this education program.

Leveraging its established Watt Watchers Consumer Education Plan, Allegheny Power will create a message platform built around a theme of energy-efficiency and conservation and the steps customers can take to save electricity and manage their electric bills.

First, Allegheny Power will develop a comprehensive geographic media analysis of its Pennsylvania service territory to determine county-by-county media coverage that will fulfill its communication objectives. This will include:

- Newspaper coverage analysis
- Radio analysis (metro, suburban and small-market coverage)
- TV/cable Direct Marketing Association penetration analysis
- Business-to-business print coverage analysis
- Non-traditional media coverage analysis

Second, Allegheny Power will develop a comprehensive demographic targeting analysis of all customer classes in order to determine targeting requirements for buying multimedia advertising. Allegheny Power will utilize extensive customer demographic data to shape the appropriate media usage by their target. This will be done by examining media habits of those within the target demographic groups using local syndicated research such as Scarborough, Media Audit and/or Marshall Marketing. Due to the geographic uniqueness of the Allegheny Power footprint, media selection will be highly weighted based on the ability to deliver within the designated geography with minimal waste.

***Marketing Strategy***

Allegheny Power will execute a two-tiered strategy to communicate the energy efficiency and conservation programs.

***Tier One***

Allegheny Power will create an umbrella message to educate customers that there are energy efficiency & conservation and demand response programs available. This communication will be delivered via mass media and will direct customers to the web to learn more about the specific programs that will benefit their lifestyle.

***Tier Two***

The second tier will involve customer segmentation to determine which customers/counties have the highest concentration of energy consumption. Directly targeting these specific targets will allow Allegheny Power to focus their dollars and create the biggest return on investment.

Both Tier One and Tier Two strategies will encourage enrollment in the programs, but Tier Two will be much more targeted and focused on enrollment. Identification of customers who are “early adopters” of the programs will be a key component of the targeted marketing approach. Additionally, Allegheny Power will highlight corporate and employee results in EE&C initiatives to underscore that the company is an equal partner and actively supports the goals of Act 129.

***Target Audiences******Residential energy customers:***

- People in the households responsible for reviewing and paying utility bills
- African-American and Latino markets
- Senior Citizens
- Low Income Households
- Rural Households
- School-Aged Children

***Commercial energy customers:***

- Small business customers

All segments will be targeted for Tier One messaging. A select group will be more targeted for Tier Two communications. Allegheny Power’s account managers will be used to market those programs designed for large commercial industrial customers—leveraging existing relationships with those customers.

***Program Components***

Allegheny Power will utilize the following marketing mix to communicate to its customer base:

***Tier One***

- Customer Service Center/Fulfillment Provider
- Conservation Service Provider(s)
- CBO Outreach
- Newspaper
- Radio
- Internet
- Non-traditional Vehicles
- Press Releases
- Personal Contacts
- Educational Materials

***Tier Two***

- Bill Inserts
- Direct Mail/Email
- Non-traditional Vehicles

***Tier One Approach******1. Customer Service Center Training***

Allegheny Power will train its customer service center representatives so they are prepared to assist customers by providing them up-to-date information on energy efficiency, conservation and details of specific Act 129 programs.

***2. Conservation Service Provider(s)***

CSPs will offer a unique point-of-entry to customers, especially the audit programs. Participating customers will already be engaged in the process of improving energy efficiency and conservation so the CSP will be in an excellent position to provide information on the full portfolio of programs.

***3. Community-based Outreach***

Comprehensive customer education programs are most efficient when they include a partnership with established organizations and agencies. The Company will develop outreach plans as needed to reach diverse stakeholder groups.

Special events offer unique opportunities to talk face-to-face with customers and answer any questions they have about specific programs and energy savings available to them. Business and community events can be used to highlight program features and technologies in ways that advertising cannot and allow Company representatives to make personal presentations with the opportunity for customers to have their questions answered in familiar surroundings.

#### **4. Newspaper**

Newspaper is geographically flexible and can be purchased to cover Allegheny Power's entire footprint. Newspaper offers the ability to communicate necessary message details and offers a format appropriate for announcements. Newspaper ads will be placed within the appropriate editorial section whenever possible; for example, running small business ads in the business pages of the newspaper. Print advertising will complement the radio spots and provide a visual aid as well as permit specific information about the programs to be communicated to customers. Print placements reach various sized minority populations and feature various sized advertisements.

#### **5. Radio**

Radio is another mass media vehicle useful to reach a broad audience base with the Company's general awareness message. Radio also allows for flexibility in the message mix and station selection. Radio also provides an effective tool to reach illiterate populations and also customers for whom English is a second language.

#### **6. Internet**

Up-to-date information on Allegheny Power's education campaign and program offerings will be posted on its web site. The web site will present information for residential, commercial and industrial customers, including Watt Watchers materials and information about specific programs

#### **7. Non-Traditional Communication Vehicles**

An analysis will also be conducted to determine the effectiveness of innovative, non-traditional vehicles to reach target audiences. Creative and production viability among desired media will also be reviewed. Non-traditional advertising will be an important element to connect with hard-to-reach audiences in an unexpected and niche way.

Allegheny Power intends to spread its messages through unconventional and innovative vehicles that may include, but are not limited to:

- Energy efficiency and conservation reminders, such as switch plates, magnets and reusable shopping bags printed with energy conservation messages;
- Social media; and
- Targeted e-mail blasts for customers who request e-mail updates.

#### **8. News Releases**

News releases will be issued to keep all stakeholders abreast of the energy awareness effort and ultimately to alert them of the specific programs that will be available to help save energy.

### ***9. Personal Contacts***

Allegheny Power's employees will create an awareness and interest in energy conservation and demand response while incenting early adoption and transformation. Allegheny Power's account managers will provide personal communication with large commercial and industrial customers to answer specific questions and provide additional information.

### ***10. Educational Materials***

Allegheny Power will create educational materials to provide detailed program information to targeted audiences and complement other campaign elements. Some materials will target small business customers and make materials available through outreach at business-oriented events, such as chamber of commerce meetings, through the web site and mailed-upon-request information. Printed materials will also be developed for approved programs targeting other customer segments.

### ***Tier Two Approach***

#### ***1. Bill Inserts***

Bill inserts provide flexibility to customize messages to specific demographics within the Allegheny Power footprint. Act 129 bill inserts will be incorporated into the regular cycle of inserts that are sent to Pennsylvania customers. Inserts will support the General Awareness Campaign but can also be more program-specific as needed.

#### ***2. Direct Mail***

Allegheny Power will use direct mail as a way to target specific residential and small business audience segments. Information will include materials explaining how to conserve energy, and the programs that will be provided to help customers manage electricity consumption. The Company is able to geo-target certain customer segments and communicates more specific and relevant messages.

#### ***3. Email Newsletters***

Allegheny Power will encourage customers to provide their email addresses so that the Company can send them monthly or quarterly EE&C newsletters. The newsletters will highlight program results and reinforce key plan messages.

#### ***4. Non-Traditional Vehicles***

Allegheny Power will use non-traditional vehicles to reach its customer base in an unexpected or niche way.

### ***Program Implementation Activities for 2009/2010:***

After Commission approval of the Company's plan Allegheny Power will launch the Pennsylvania Watt Watchers Energy Efficiency & Conservation Campaign

marketing plan to inform customers of the programs, program components, the benefits of energy conservation and the values of participating in these efforts.

Implementation of the Pennsylvania Watt Watchers Energy Efficiency & Conservation Campaign will begin with high-level public relations and mass media advertising that will create immediate awareness among customers and community leaders who are influential in educating customers and encouraging them to participate in energy efficiency and conservation programs. Small business customers will also be targeted through outreach to organizations that serve them, seminars and educational functions. Throughout the campaign, detailed publications and a web site will be available for those customers who seek more information or to sign up for programs.

### *Program Economics*

#### *Program Assumptions and Analysis*

For estimating costs of the Pennsylvania Watt Watchers Energy Efficiency & Conservation Campaign, Allegheny Power assumed newspaper and radio advertising would be supplemented by bill inserts providing customers with campaign awareness information each year, additional special events per year centered around activities that would provide customer-related information regarding energy efficiency and conservation, direct mailing(s) to target audiences that describe specific programs, and customer training sessions per year providing contact with targeted customers.

**9.2.5. Indicate that the EDC will provide a list of all eligible federal and state funding programs available to ratepayers for energy efficiency and conservation.**

Allegheny Power plans to promote and provide to customers any opportunities for funding that are available for energy efficiency and conservation. This information is contemplated to be included in relevant program marketing materials, on the Company's web site or through other marketing and advertising channels as available. A partial list of these funding sources is found in Appendix Section 10.7.3.

**9.2.6. Describe how the EDC will provide the public with information about the results from the programs.**

Allegheny Power maintains an on-line database of available agencies for Company representatives to use as a reference for referrals that provides information on available bill assistance and energy efficiency and conservation programs.

Allegheny Power also informs customers of funding and programs via bill inserts, direct mailings and its website.

**10. Appendices**

**A. Commission approved electricity consumption forecast for the period of June 1, 2009 through May 31, 2010.**

**Allegheny Power Connected Load Forecast - MWh**  
2009 Budget Load Forecast (LF08Q3)

Excludes wholesale

MWh				Year							Month				
Company	Jurisdiction	Customer Class		2009							2010				
				Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
WP	Total	Residential	Billed	529,351	609,015	645,120	584,257	507,547	536,636	635,877	716,090	712,541	662,566	581,508	510,839
		Commercial	Billed	413,374	443,405	453,634	436,814	406,200	402,812	422,587	437,106	433,175	427,224	414,760	406,235
		Industrial	Billed	699,576	665,395	717,913	711,374	698,869	719,504	689,229	720,813	762,429	712,259	737,987	722,303
		Street Lighting	Billed	4,359	4,359	4,359	4,360	4,360	4,360	4,361	4,361	4,361	4,362	4,362	4,362
		Retail Billed MWh Sales	Billed	1,646,660	1,722,174	1,821,026	1,736,805	1,616,976	1,663,312	1,752,054	1,878,370	1,912,506	1,806,411	1,738,617	1,643,739
		Losses *		181,656	228,693	168,559	(43,190)	104,490	116,175	237,338	187,834	(19,497)	108,917	(24,902)	141,398
		Generation Calendar MWh	Calendar	1,828,316	1,950,867	1,989,585	1,693,615	1,721,466	1,779,487	1,989,392	2,066,204	1,893,009	1,915,328	1,713,715	1,785,137

\* Forecasted losses include normal electrical transmission and distribution losses, company use (other than station use) and unaccounted-for differences between generation MWh and billed sales to regular customers.

**B. Average hourly demand in the EDCs 100 highest peak hours during the period of June 1, 2007 through September 30, 2007.**

**Highest 100 Peak Hours**  
**June 1, 2007 - September 30, 2007**  
*Data Excludes Wholesale Loads*

Avg of Top 100 Hrs  
**3,496 MW**

<u>Rank</u>	<u>MW</u>	<u>Rank</u>	<u>MW</u>
1	3,702	51	3,487
2	3,683	52	3,484
3	3,683	53	3,481
4	3,658	54	3,477
5	3,643	55	3,477
6	3,639	56	3,476
7	3,636	57	3,475
8	3,635	58	3,474
9	3,634	59	3,474
10	3,621	60	3,470
11	3,618	61	3,469
12	3,604	62	3,464
13	3,603	63	3,458
14	3,602	64	3,457
15	3,596	65	3,455
16	3,588	66	3,455
17	3,581	67	3,454
18	3,567	68	3,454
19	3,560	69	3,451
20	3,557	70	3,450
21	3,555	71	3,442
22	3,552	72	3,440
23	3,551	73	3,433
24	3,550	74	3,432
25	3,548	75	3,429
26	3,543	76	3,424
27	3,542	77	3,423
28	3,542	78	3,422
29	3,537	79	3,422
30	3,536	80	3,416
31	3,536	81	3,409
32	3,534	82	3,409
33	3,528	83	3,406
34	3,528	84	3,405
35	3,528	85	3,405
36	3,526	86	3,404
37	3,522	87	3,402
38	3,522	88	3,402
39	3,519	89	3,397
40	3,516	90	3,391
41	3,516	91	3,389
42	3,509	92	3,388
43	3,509	93	3,387
44	3,506	94	3,387
45	3,504	95	3,386
46	3,499	96	3,383
47	3,495	97	3,378
48	3,492	98	3,377
49	3,491	99	3,377
50	3,487	100	3,375



**C. Approved CSP contract(s).**

Allegheny Power's form CSP contract was approved by the Commission by Secretarial letter dated May 6, 2009 at Docket No. M-2009-2093218.

**Allegheny Power**

**REQUEST FOR PROPOSAL**

**for the**

**Demand Response Provider**

**for**

**Non Residential Demand Response Programs**

**Per Pennsylvania Act 129**

**Version 1**

**May 14, 2009**

Issued by: Allegheny Power, a subsidiary of Allegheny Energy Service Corporation

Electronic Proposals Due: May 29, 2009

**BIDDERS CONTRACT WORK INSTRUCTIONS**

FORM 13-346 REV. 12

DATE 05/08/2009
--------------------

<b>JOB TITLE</b>	DR Contracted Curtailment Service Provider, for Comm Progs per PA Act 129		
<b>LOCATION</b>	Allegheny Power, PA Territory		
<b>QUOTATION</b>	<input checked="" type="checkbox"/> Firm Price <input type="checkbox"/> Unit Price <input type="checkbox"/> Cost Plus <input type="checkbox"/> Rock Clause <input type="checkbox"/> Other Description: <u>Firm price per year for providing Curtailment services.</u>		
<b>ATTACHMENTS</b>	<input checked="" type="checkbox"/> Details of Work <input type="checkbox"/> Specifications <input type="checkbox"/> Tax Statement (WPP only) <input checked="" type="checkbox"/> General Terms & Conditions <input type="checkbox"/> Drawing(s) _____ Drawing Nos. _____ <input type="checkbox"/> Other: _____		
<b>EXTRA WORK</b>	Submit following: <input type="checkbox"/> Cost of Materials (Such as Net Cost + %) <input type="checkbox"/> Unit Price Hourly Labor Rates (Both Straight & Overtime) <input type="checkbox"/> Cost Plus Hourly Labor Rates (Both Straight & Overtime) <i>NOTE TO BIDDER: For further details, see Cost Plus Extra Work Pricing List, Form 26-066 attached.</i> <input type="checkbox"/> Equipment Rates: <input type="checkbox"/> Hourly <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly		
<b>INSURANCE REQUIREMENTS</b>	<i>NOTE TO BIDDER: For complete details on insurance, see Letter of Inquiry and General Terms and Conditions. Contractor awarded bid will be required to furnish certificates of insurance as outlined and in amount(s) shown.</i>		
<b>ADDITIONAL INFORMATION</b>	Arrangements to visit job site or questions regarding specifications should be directed to: NAME: Eric Rundy (erundy@alleghenyenergy.com)    TELEPHONE NO. (724) -830-5431 LOCATION: 126 Mathews St, Suite 1000, Greensburg, PA 15601		
<b>FIELD INSPECTION</b>	Site visitation & prejob discussion have been arranged for: DATE: May 15, 2009    TIME: 1:00P.M.    CONTACT NAME: Eric Rundy TELEPHONE NO. (724) 830-5431    LOCATION: Conf Call, details to be E-mailed later		
<b>OTHER MISCELLANEOUS REQUIREMENTS</b>	Dispute resolution clause - appropriate provisions stating that if a conflict exists between the RFQ and the bidder's proposal, the RFQ shall govern.		
<b>BID CLOSING DATA</b>	DATE May 22, 2009	TIME 4:00 p.m.	LOCATION Greensburg, PA 15601-1689
<b>TENTATIVE SCHEDULE</b>	STARTING DATE November 01, 2009	COMPLETION DATE Potentially Dec 31, 2009	



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**APPENDICES**

Appendix A1 – Pricing Instructions and Details

Appendix A2 – Pricing Template (Attached as separate electronic file)

Appendix A3 – General Terms and Conditions, Form 26-069

Appendix A4 – Non-Disclosure Agreement (Completed Post Bid & Pre Contract Award)

Appendix A5 – Vendor Information, Form 37-215

Appendix A6 – Subcontracting Plan, Forms 37-216 & 37-217

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Appendix A8 – Substance Abuse Program

Appendix A9- Strategic Sourcing Website = Power Advocate Guidelines & Quick Start-Up

## 1. INTRODUCTION

Allegheny Power, a subsidiary of Allegheny Energy Service Corporation, is seeking vendors to manage system load by developing a load curtailment program for both small commercial and industrial, and large commercial and industrial customer classes. The program is designed to capture electrical demand reduction opportunities in the commercial and industrial sectors during the 2010-2013 implementation periods.

### 1.1 Background

On October 15, 2008, Governor Edward Rendell signed Act 129 of 2008 (“the Act” or “Act 129”) into law. The Act took effect 30 days thereafter on November 14, 2008. Among other things, the Act created an energy efficiency and conservation program, codified in the Pennsylvania Public Utility Code at Sections 2806.1 and 2806.2, 66 Pa. C.S. §§ 2806.1 and 2806.2. This program requires an EDC with at least 100,000 customers to adopt a plan, approved by the Commission, to reduce, by May 31, 2013, peak demand by a minimum of four-and-a-half percent (4.5%) of the EDCs annual system peak demand measured against the EDCs demand average over the 100 highest peak hours during the period of June 1, 2007 through May 31, 2008.

### 1.2 Buyer Overview:

Allegheny Energy headquartered in Greensburg, PA., is an investor-owned electric utility with total annual revenues of over \$3 billion and more than 4,000 employees. The company owns and operates generating facilities and delivers low-cost, reliable electric service to 1.6 million customers in Pennsylvania, West Virginia, Maryland and Virginia. For more information, visit the company’s website at [www.alleghenyenergy.com](http://www.alleghenyenergy.com). Allegheny Power is the delivery side of the Allegheny Energy Corporation



State	Residential	Commercial	Industrial
Maryland	220,000	22,500	2,100
Pennsylvania	620,000	81,000	13,500
Virginia	85,500	14,150	1,550
West Virginia	440,000	61,000	9,150

### 1.3 Purpose

As described herein, the Allegheny Power (Allegheny or Company) is requesting the services of a contractor to provide one, or more of the following:

- Perform an initial market assessment of the load resources that are available from Allegheny's commercial and industrial customer base.
- Design, document, market and execute a comprehensive and complete Load Curtailment plan for Demand Response w/ Allegheny Power's PA Commercial and Industrial customers, on Allegheny's behalf, for delivery years 2010/2011 and 2011/2012.

Allegheny Power currently administers a demand response program as a Curtailment Service Provider in PJM's capacity market. It is Allegheny's intent for the DR vendor to administer this program on Allegheny's behalf, continuing to work as a CSP within the guidelines of PJM's capacity market for the 2010/2011 and 2011/2012 delivery years.

- Design, document, market and execute a comprehensive and complete Load Curtailment plan for Demand Response w/ Allegheny Power's PA Commercial and Industrial customers, on Allegheny's behalf for delivery years 2012/2013 delivery years.

Upon the discontinuation of the PJM demand response program for the 2012/2013 delivery years, the vendor will implement the demand reduction program per the goals of Allegheny to continue to meet the requirements of Act 129.

- Design, document, market and execute a customer demand response (load control) program. The main objective of this program is to offer for a customer to control their demand at and within their facility by implementing a self dispatched demand control system at and within the customer's facility. The end result for the customer is that he will maximize savings by controlling their monthly peak demand reducing the demand cost charged by the utility rate structure.

## 1.4 Expectations

The contractor must have the capability directly or through a subcontractor to perform curtailment services for the demand response program which is consistent with accepted curtailment program standards and protocols, and to comply with any Pennsylvania Public Utility Commission (“PA PUC”) and PJM requirements per PJM’s Reliability Assurance Agreement (RAA) and Open Access Transmission Tariff (OATT), and PJM Manual #M18. It is expected that the selected bidder and the Company’s personnel will work very closely to ensure the Curtailment Service Provider proposal meets all applicable requirements.

The process may include working with other stakeholders such as PA PUC staff, PJM staff, PA PUC’s statewide Plan Evaluator and applicable Pennsylvania Consumer Advocates.

The Company is issuing this Request for Proposal (“RFP”) with the goal of obtaining proposals for a comprehensive curtailment plan of the Company’s curtailment program. The PA Act 129 programs may change because of PUC action, the establishment and feedback from a collaborative group or other stakeholders, or the Company’s decisions. For the purposes of responding to this RFP, assume that there will be no changes to what was filed for PA Act 129 and that there will be no changes to the PJM RAA, OATT or Manual M18.

The winning bidder will execute a contract in the form of the Standard Terms and Conditions attached hereby, with the Company. Additional other contractual requirements will be required for the bidder to enter into a contract with Allegheny to perform Curtailment Service Provider activities within the PJM markets. Allegheny will make available such documents upon review of vendor’s proposals and issuing notice that Allegheny wishes to proceed with vendor’s proposal.

## 2.0 DEMAND RESPONSE PROGRAM

### 2.1 Overview

The Company will be implementing a suite of Demand Response programs to provide customers with cost saving opportunities, as well as providing for environmental benefits and a positive impact on regional loads. The programs covered in this RFP are limited to providing a load curtailment type demand response program for Allegheny’s commercial and industrial customers. The assessment of the demand response markets and potential programs are being evaluated by responses to the following items:

- Initial Market Assessment
- Curtailment Service Provider in PJM as Agent for Allegheny
- Allegheny Demand Response Program
- Individual Customer Demand Response (Control) Program

**\*\* Allegheny is open to other alternative proposals that would help meet the requirement of Act 129.**

**2.2 Pennsylvania Act 129 Requirements**

The goal of Allegheny Power’s Demand Response program is to reduce the peak load on the system by 4.5% during the top 100 hours of operation. Based on historic operating data, a demand reduction target of 157 MW, averaged over the top 100 summer (June – September) operating hours is Allegheny’s goal. Allegheny will be implementing other demand response initiatives, including contributions from energy efficiency measures that will also contribute to the Act 129 demand reduction Goal. The award of a contract to implement any demand response program is contingent upon any approvals of the Pennsylvania Public Utility Commission.

**2.3 Market Analysis of Demand Response Opportunity**

Allegheny is requesting an analysis of the available demand potential for each customer segment described in Section 2.4.1 of this RFP. The goal of the program is to achieve a minimum controllable load reduction based on the available market. The following items shall be addressed in the study:

- a. Identify a minimum controllable and stretch goal for load reduction per the following customer segments:

Small Commercial/Industrial	Demand < 500 kW
Large Commercial/Industrial	Demand > 500 kW
Government	Schools
	Higher Education Non-Profit Municipalities

- b. Based on the overall study of available demand, the vendor shall assign a “confidence level” rating to determine how much of this demand is realizable. The “confidence level” shall be broken down in the following ranges:

<b><u>Confidence</u></b>	<b><u>Realizable MW</u></b>
100%	



75%

50 %

25% and below

c. The vendor shall describe the manner, size and hourly shape of the proposed load reduction. Please state any data or other requirements for the analysis in your proposal. Allegheny will provide metered interval data that is available for each customer segments and customer data that is available including: SIC code, peak demand, etc..

d. The vendor shall provide an analysis of the capacity markets and anticipated changes to the PJM ILR programs.

**2.4 Curtailment Service Provider - DR Program for Delivery Years 2010/2011 and 2011/2012**

Allegheny is requesting a DR vendor to implement a demand response program as a Curtailment Service Provider as an agent for Allegheny , per the requirements of PJM. Allegheny is presently acting as Curtailment Service Provider, and we are asking a DR vendor to administer this program as an agent for Allegheny. The load curtailments will need dispatched, monitored, measured, and verified by the vendor within the following general parameters:

Program Type(s)	Interruptible Load Resource Economic Load Resource
Program Delivery Year	June 1 – May 31
Interruptions Per Year	Up to 10
Interruption Duration	Up to 6 consecutive hours
Notification Time	1 - 2 hours, by customer
Load Management Type	Firm Service Level or Guaranteed Load Drop
Load Reduction Amount	100 kW, minimum
Metering Requirement	Interval metering (see Section 2.4.2)
Load Shedding Speed	1-2 hours

### **2.4.1 Customer Segments**

The program will be focused on load control for the following customer segments:

**Large Commercial Load:** There are approximately 2900 commercial customers with a demand ranging from 100 kW to 2000 kW. The market potential for this customer segment is estimated at approx. 754 MW (average over top 100 hours).

**Large Industrial Load:** There are approximately 150 customers with a demand larger than 2000 kW. The market potential for this customer segment is estimated at approx. 554 MW.(average over top 100 hours).

**Small Commercial Load:** There are approximately 89,000 general service customers with a demand up to 100 kW. The market potential for this customer segment is approx. 646 MW. (average over top 100 hours).

### **2.4.2 Metering and Communications Requirements:**

The vendor shall have the technology to monitor in real time the aggregate load that is enrolled in Allegheny's program, and the response that is achieved during the demand response event. Allegheny expects the vendor to actively manage a demand response event using real time data in order to pro-actively manage the response and make adjustments as needed.

The DR Vendor will be required to provide and install all necessary communications and data equipment at the participating customer's facility. If the DR vendor needs to install additional sub-metering to complete the installation, the vendor shall do so at their expense. All additional metering required shall meet the accuracy and reliability standards, as required by Allegheny and/or PJM. The DR vendor shall be responsible for all control power and and/or communications services as part of the installation.

At present and for the purposes of this proposal, Allegheny will provide KYZ pulses for use by the DR Vendor in determining the interval loading. The wiring will be

terminated local to Allegheny's revenue meter. Allegheny will NOT provide any shadow metering or sub-metering equipment for this program.

### **2.4.3 DR Vendors Scope of Work**

The successful vendor shall provide the following services, as part of the contract:

- 2.4.3a The bidder will act as an agent for Allegheny in the marketing of commercial and industrial customers into the demand response program. The vendor shall be responsible for developing all marketing material, including promotional literature, directly marketing by phone calls or customer visits, as well as using direct mail pieces. Allegheny's industrial customers are presently managed by an Account Management staff. All direct contact with large commercial and industrial accounts will be co-managed with Allegheny's Account Managers. Marketing and promotional materials will be made available to Allegheny for review and approval prior to program start.
- 2.4.3b The DR Vendor will provide all necessary forms and/or contracts to enroll customers into the program. Contractual documents will be made available to Allegheny for review and approval, prior to program start.
- 2.4.3c The DR vendor will provide all necessary infrastructures to implement, monitor, dispatch, notify, measure and verify the demand response activities.
- 2.4.3d The DR vendor will perform all services to act as a Curtailment Service Provider per PJM's requirements.
- 2.4.3e The DR vendor will perform all resource testing, reconciliation and compliance activities related to participating as a Curtailment Service Provider per PJM's requirements.

### **2.4.4 Event Notification**

The DR vendor shall develop a process to notify participating customers and Allegheny for all dis-patchable events. The vendor shall use both an automated telephone calling system and an email paging system to notify customers of the events.

The basic notification procedure, shall include the following entities:

- **For PJM Emergency (ILRP) or Economic (ELRP) Events**
  1. PJM calls ILR/ELR Event and Notifies DR Vendor, and Allegheny Power Dispatch
  2. Allegheny Dispatch contacts Allegheny Electric Supply
  3. DR Vendor contacts Customer
  4. DR Vendor contacts Allegheny Power Account Manager (if managed account)

## **2.5 Demand Response Program for Delivery Year 2012/2013**

Allegheny is requesting a proposal for a Demand Response program for delivery years 2012/2013 to meet the goals of Act 129.

The program has to consider the following technical and energy market issues:

- Advance Metering Initiatives
- Effect of hourly rate structures
- Direct Load Control – Small commercial customers air conditioners, or other loads
- Future capacity markets
- Energy efficiency contributions for demand response
- Dispatch methods and technology
- Event notification, reconciliation and compliance activities

The following delivery and pricing topics need to be addressed in the DR vendor's proposal:

- Explain how contract will be structured between Allegheny –Customer-DR Vendor
- Costs: Setup costs, cost per customer, \$/MW/Day, stretch goals, etc.
- Identify staffing or other requirements for both DR Vendor and AP personnel
- Timeline for development of Demand Response Program
- Identify customers and target DR amounts per the following segments:

Small Commercial/Industrial

Demand < 500 kW

Large Commercial/Industrial	Demand > 500 kW
Government	Schools, Higher Education, Non-Profit Municipalities

## 2.6 Demand Response Load Resources Only

Allegheny is requesting proposals for any load resources that directly wants to bid price and volume for Allegheny's Demand Response program in delivery years 2012/2013.

For example: XYZ Food Mart has 100 stores that are controlled by a central office and can contribute 1200 kW, in aggregate, and can self dispatch the load response.

As part of your proposal, please address the following technical and delivery issues:

- Estimated load resource(s) MW and confidence level
- Description of resource
- Proposed curtailment hours
- Proposed load control schemes
- Restrictions or limitations
- Energy efficiency contributions for demand response
- Advanced metering requirements

## 2.7 Customer Demand Response (Control)

Allegheny is requesting proposals for the development of a customer demand response (load control) program. The main objective of this program is for a customer to control their demand by implementing a self dispatched demand control system. The end result for the customer is that he maximizes saving by controlling the demand charge by the utility rate structure. The program would not consider any type of grid initiated demand response events. The program should consider the following technical issues:

- Energy Efficiency Contributions for Demand Response
- Metering Requirements, including Advanced Metering Infrastructure
- Hourly, Time of Use Rate Structures
- Dispatch/Control Technology (hardwired, wireless, etc.)
- Controllable loads (furnaces, air handlers, compressors, heating, HVAC, etc.)

### **3.0 GENERAL SUBMITTAL INFORMATION**

This Section of the RFP provides information for bidders concerning the submittal process, general requirements, schedule, and qualifications. Specific requirements for the content and preparation of bids are contained in Section 4.

#### **3.1 Questions, Contact and Communications**

All communications between Allegheny Power and interested bidders will be handled by Allegheny Power's strategic sourcing web site (Power Advocate see Appendix A10). These communications include the posting and receiving of questions and answers, and submitting electronic versions of the proposal.

No other contact with Allegheny Power, related to this RFP shall be made after the release of the RFP. Any unauthorized contact may result in the disqualification of the contacting firm's proposal(s). Bidder questions related to this RFP should be submitted using the online discussion tool on Allegheny Power's strategic sourcing website. Questions will be accepted until 5 PM EST on May 22, 2009. Questions submitted after this date will not be addressed. Copies of all questions and answers will be posted on the strategic sourcing website and will be available to all invited bidders.

#### **3.2 Intent to Bid**

Potential bidders are encouraged but not required to submit an E-mail notification of intent to submit a proposal in response to this RFP. This information helps Allegheny Power plan and administer the RFP. Bidder's notice of intent to bid should be submitted by Thursday, May 21, 2009 to Allegheny Power's strategic sourcing web site (PowerAdvocate see Appendix A10).

#### **3.3 Bidders' Conference Call**

Bidders are encouraged, although not required, to participate in a bidder's conference call. The conference call will provide interested firms with an opportunity to seek clarification on the requirements of the Residential and Commercial EM&V RFP. Following is the schedule and instructions for the conference call:

Date: Wednesday, May 20, 2009 Time: 1-2:30 PM EST

##### **Dial-In Information:**

1. Dial 1-888-521-5895
2. You will then be prompted to enter an extension = 3144
3. You will then be asked to introduce yourself = Please use Co. Name

#### **3.4 RFP Submittal Format and Due Date**

Bidders are required to submit an electronic version of their proposal to Allegheny Powers strategic sourcing website. The submittals must be uploaded by 4 PM EST Friday May 29, 2009. Late submittals will be rejected.

**Bidders are required to submit two documents: their proposal (as an Adobe Acrobat .pdf file) and a Microsoft Excel file with their pricing. See Section 4 for details.**

Allegheny Power is not liable for any costs incurred by any person or firm responding to this

RFP or participating in best and finals interviews.

### 3.5 RFP

### Schedule

RFP release	May 15, 2009
Bidder's conference call	1-2:30 PM EST, May 20, 2009
Intent to bid notice	May 21, 2009 by 5:00PM
Close of RFP question period	5 PM EST, May 22, 2009
<b>Electronic Proposals due</b>	<b>4 PM EST, May 29, 2009</b>
Internal Technical Evaluation by Allegheny Power	June 1 to 5, 2009
Interviews	Week of June 08, 2009
Contract negotiations	Week of June 08, 2009
Anticipated contract start date	Week of January 01, 2010

### 3.6 Minimum Qualifications

Any bidding team must have at least the following qualifications to be considered for selection:

1. Key staff members must have demonstrated experience delivering high-quality implementation services for utility sponsored Demand Response Programs. Demonstrated organizational, financial, data tracking and reporting abilities that will adequately support the work load and demands associated with the implementation effort;
2. The lead firm or entity must demonstrate sufficient infrastructure, history and experience to handle the required work and manage sub-contractors, if applicable;
3. Demonstrated ability to provide independent implementation of Allegheny Power's Demand Response programs with the implementation free of any conflict of interest with other services and products offered by the bidder's team. **The DR Vendor must be registered with the Pennsylvania Public Utility Commission as a Conservation Service Provider prior to contract execution.**

### **3.7 Instructions to Bidders**

The following are general instructions to bidders. Specific requirements for the content and format of the proposals are presented in Section 4.

#### **3.7.1 Modification or Cancellation of the RFP**

The Company reserves the right, in its sole judgment and discretion, to modify or cancel this RFP. The Company will post a notice on the RFP website and make reasonable efforts to notify participants of any such changes, cancellations, or schedule changes. The Company shall not have any responsibility for making such notification. The Company shall not have any liability for damages suffered by bidders as a result of modification or cancellation of the RFP.

#### **3.7.2 Proposal Preparation Costs**

Costs for developing proposals are entirely the responsibility of the bidder.

#### **3.7.3 Post Proposal Negotiation and Awarding of Contracts**

Allegheny Power reserves the right to negotiate both price and non-price factors during any post-proposal negotiations with a finalist. Allegheny Power has no obligation to enter into an Agreement with any respondent to this RFP and may terminate or modify this RFP at any time without liability or obligation to any respondent. This RFP shall not be construed as preventing Allegheny Power from entering into any Agreement that it deems appropriate at any time before, during or after this RFP process is complete. The Company may, but is not obligated to, request additional information and materials from any bidder for evaluation of a proposal. Failure to provide such additional information and materials may result in rejection of the proposal for further evaluation.

#### **3.7.4 Allegheny Power is under No Obligation to Execute Agreement**

Allegheny Power reserves the right to terminate the RFP process or reject any or all of the proposals received in response to this RFP at its sole discretion. Also, the bidder understands that this RFP is not intended to and does not constitute a commitment by Allegheny Power to consummate any definitive agreement with any bidders. Neither the Company nor any bidder will have any rights or obligations of any kind whatsoever by virtue of the RFP or any other written or oral expression by any party hereto.

#### **3.7.5 Changes in Scope of Work**

Provisions for payment for any additional work or changes in the scope of the work shall be mutually agreed upon at the time the EM&V Contractor is requested to perform additional work or change the scope of the work. Allegheny Power reserves the option to price the work on lump sum, time and material or competitive bid or other basis.

#### **3.7.6 Changes in Key Personnel**

Changes in EM&V C key personnel may not be made without written approval of Allegheny Power.

#### **3.7.7 Bidders Acceptance and General Terms and Conditions**

The submission of a proposal to Allegheny Power shall constitute a Bidder's acknowledgement and acceptance of all the terms, conditions and requirements of this RFP. (See Appendix A3 for



General terms and Conditions, Form 26-069)

**A list of exceptions to this document should be returned with bidder's response, see Section 4 of this RFP.**

Bidders shall note the minimum mandatory insurance requirements in Item 8 of the GT&C's and the additionally insured will be "Allegheny Energy Service Corp. and West Penn Power Co." Bidders should also note the following Sales tax message "Buyer is exempt from PA sales tax – direct permit applies" which applies to Item 15 of the GT&C's.

**3.7.8 All Submitted Proposals Become Exclusive Property of Allegheny Power**

All proposals submitted to Allegheny Power pursuant to this RFP shall become the exclusive property of Allegheny Power and may be used for any reasonable purpose by Allegheny Power.

**3.7.9 Confidentiality Terms and Proprietary Information**

Allegheny Power shall consider materials provided by bidders in response to this RFP to be confidential. However, bidders also agree that Allegheny Power may provide copies of the bidder's proposal to the PA PUC. Bidders should be aware that their proposal, even if marked "Confidential," may be subject to discovery and disclosure in regulatory or judicial proceedings that may or may not be initiated by Allegheny Power. Bidders may be required to justify the requested confidential treatment under the provisions of a protective order issued in such proceedings. If required by an order of an agency or court of competent jurisdiction, Allegheny Power may produce the material in response to such order without prior consultation with the bidder. The successful bidder will be required to execute a confidentiality agreement with Allegheny Power prior to contract award (Appendix A4).

**3.7.10 Warranty on Information**

The information provided in the RFP, or on the Company's RFP website, has been prepared to assist bidders in evaluating the RFP. It does not purport to contain all the information that may be relevant to a bidder in satisfying its due diligence efforts. The Company makes no representation or warranty, expressed or implied, as to the accuracy or completeness of the information, and shall not, individually or as a corporation, be liable for any representation expressed or implied in the RFP or any omissions from the RFP, or any information provided to a bidder by any other source.

A bidder should check the Company's website frequently, to ensure it has the latest documentation and information. Neither the Company nor its representatives shall be liable to a bidder or any of its representatives for any consequences relating to or arising from the bidder's use of outdated information.

**3.7.11 Hold Harmless**

Bidders shall hold Allegheny Power harmless of and from all damages and costs, including but not limited to legal costs, in connection with all claims, expenses, losses, proceedings or investigations that arise as a result of the RFP or the award of a bid pursuant to the RFP.

**3.7.12 Permits, Licenses and Compliance with the Law**

Supplier shall obtain all licenses and permits that may be required by any governmental body or agency necessary to conduct supplier's business or to perform hereunder. Supplier's

subcontractors, employees, agents and representatives of each in performance hereunder shall comply with all applicable governmental laws, ordinances, rules, regulations, orders and all other governmental requirements.

### **3.8 Notice to Bidders**

Allegheny is notifying potential vendors that other contractual requirements will be required for the vendor to enter into a contract with Allegheny to perform Curtailment Service Provider activities within the PJM markets. Allegheny will make available such documents upon review of vendor's proposals and issuing notice that Allegheny wishes to proceed with vendor's proposal.

## **4. SUBMITTAL REQUIREMENTS**

### **4.1 Outline**

Proposals must include each of the following items. Please see sections of this RFP listed in parentheses for more information regarding a specific item.

- Proposal cover and transmittal letter
- Executive Summary
- Work Scope and Schedule (5.1)
- Short Essays (5.2)
- Proposal Pricing (5.3)
  - Pricing Explanation and Allocation Logic (5.3 Appendix A1)
  - Pricing Template (5.3 Appendix A2)
- Project Management (6.1)
- Bidder's Background (6.2)
- Bidder's Experience (6.3)
- References (6.4)
- Vendor Information, Form 37-215 (Appendix A5)
- Subcontracting Plan, Form 37-216 & 37-217 (Appendix A6)
- Safety & Health Commitment (Appendix A8)
- Substance Abuse Program (Appendix A9)

### **4.2 Electronic Submittal Instructions**

Electronic submittal should consist of two items:

1. A .doc or .pdf file containing all of the items listed in Section 4.1 of this document, in the order presented.
2. A completed Pricing Template in .xls format, satisfying the criteria listed in Section 5.3 of this document.

The PDF file and Excel spreadsheet should be attached to an email addressed to the designated contact person at the Company. The appropriate contact information is listed in Section 6.1 of this document.

## 5.0 PROPOSAL REQUIREMENTS

To be considered, bidders must adhere to the guidelines and requirements set forth in this RFP. The Company reserves the right to make changes to the RFP including the elimination of some conservation measures with proper notification to bidder. The Company also reserves the right to withdraw the entire RFP at any time in the process. The Company is under no obligation to procure services under this RFP.

In addition to providing a Work Scope and Schedule document meeting the criteria listed in Section 4.1, proposals should also contain detailed responses to all of the questions or statements listed in Sections 5.2 (Short Essays), 5.3 (Proposal Pricing), and 6 (About the Bidder). Where a statement is made, Bidder should indicate how it will comply with the statement. All responses should clearly indicate the referenced section. Please note a response to each one even if it repeats that of another section, notes not applicable, or response declined. Responses should be thorough yet concise. Excessive length is discouraged.

### 5.1 Work Scope and Schedule

**At a minimum, bidders should include a detailed description of the following items in their Demand Response proposal. The bidder may separately address different methods or strategies should the bidder perceive significant benefit there from. The bidder needs to clearly mark the sections to which it is responding.**

1. Detailed cost-effective Demand Response proposal program will include, but is not limited to, the following elements:
  - a. approach for assessing each evaluation component (market, process and impact) with the timing, key milestones, and scheduled tasks
  - b. description of the evaluation objectives, evaluation questions, and evaluation rigor level for each program category
  - c. description of the expected evaluation techniques, explicitly specifying the standards or protocols relied upon
  - d. description of expected evaluation software that will be used
  - e. description of the expected market research including customer surveys or other surveys
  - f. description of data and information expected to be needed from program administrators
  - g. description of primary research expected to be necessary
  - h. description of how the overall program evaluation and project management are expected to evolve over time
  - i. how program results are communicated to key stakeholders to facilitate their incorporate into future program design with the IT methodology and format you can support.

2. Data collection and management including proposed reporting. (e.g., PA Act 129 quarterly reports, PJM Capacity Markets & Reports)
  - a. Description of electronic information expected to be needed from Allegheny Power
  - b. Description of electronic information expected to be provided to Allegheny Power
  - c. Description of system interfaces expected to be needed with Allegheny Power and other third-party systems
  - d. Description of data file formats that will be supported (i.e. xml, flat files, etc)
  - e. Description of data transfer technologies that will be supported (i.e. ftp, EDI, etc)
  - f. Frequency of data transfer
3. Reporting documents for the Company, along with recommended evaluation schedule for each program and detailed work plan.
4. Plan for annual updates to Demand Response Plan.

## **5.2 Short Essays**

Please respond to the questions and information requests that follow in the order in which they appear, referencing the section number. If there is additional information not solicited in the included questions that would provide important information concerning the bidder's approach and capabilities to satisfy the requests of this RFP, feel free to include that information at the end of the answers to questions. All responses should be provided in Microsoft Office format. Questions or statements should be restated and followed by the bidder's responses. Tables should be completed in the format provided.

## **5.3 Proposal Pricing**

The pricing instructions and the pricing template that must be completed by the bidder can be found in Appendices A1 and A2. If granularity of any portion of the pricing template is deemed excessive, please explain the reasoning and provide the greatest level of pricing detail possible without being excessive.

## **6. ABOUT THE BIDDER**

### **6.1 Project Management**

Please answer the following questions to provide information about your project management approach.

1. Describe your methodology for project management.
2. From past projects, indicate the amount of the Company' support such as number of FTEs expected to support this project on an ongoing basis and in what capacities or to handle what tasks.
3. Describe your methodology and tools for managing project quality. Include a methodology for tracking issues (both resolved and unresolved).
4. Describe your project problem resolution process.
5. Describe how updated methodologies, baselines, standards would be handled in analysis, reporting, etc.
6. Include a Management and organizational chart that depicts the proposed relationships and proposed agreements among team members.
7. Identify lead staff member assigned to manage the evaluation work (including short bio and explanation of why they are qualified to manage the work).
8. Identify key personnel assigned to the project and describe their responsibilities.
9. Lists anticipated subcontractors and describe subcontractors' mark-up percentage.
10. Describe use of local contractors.

### **6.2 Bidder's Background**

At a minimum, bidder must provide the following information relative to bidder's company and team members. If the RFP response includes subcontractors, it must make clear the subcontractor's responsibility, scope of work, and capabilities to perform that work. Identical information must be provided for each subcontractor and/or joint venture member:

1. Years of professional practice (Provide the number of years of professional experience related to the areas of evaluation).
2. Total number of clients in operation with a similar demand response programs.
3. Key people assigned to evaluate the programs (include their experience and area of expertise).
4. Demonstrated ability to provide demand response solutions.
5. The D&B report reflecting the bidder's financial status.

**6.3 Bidder’s Experience**

Summarize experience and relate its relevance for each of the proposed programs including specific examples where the bidder has executed similar demand response programs for that particular customer segment throughout North America. Several examples of actual programs should be provided.

**6.4 References**

Appendix A6 - Vendor Company and Evaluation Questionnaire requires 3-4 client references. Vendors should provide references for each one of the residential and small commercial programs that the Vendor has evaluated. Please follow the below format when providing references.

Customer/Client Name					
Reference Name					
Title					
Phone Number					
Mailing Address					
Fax Number					
Customer Type (for example, Investor Owned Utility, co-op and/or municipality)	Customer Size	Program Evaluated	Program Participants	Study Complete Date	Evaluation Technique (engineering, interval metering, and/or billing data)

## **7. SELECTION PROCESS AND EVALUATION CRITERIA**

Allegheny Power's business principles include selecting consultants using a fair, transparent, well defined, clear and unbiased process based on explicit selection criteria. Using these principles, a quick and straightforward selection and contracting process is planned with work scheduled to begin at the end of January 2010. This Section describes the selection process and evaluation criteria.

### **7.1 Selection Process**

All proposals will be evaluated using the following process:

#### Step 1: Threshold Review

The threshold review ensures that proposals contain all required elements and that the bidders demonstrate that there are no legal claims/judgments or conflicts of interest that would make it difficult for them to perform. The threshold review, and ongoing reviews, will also include consideration of omissions, inaccuracies or misstatements. Allegheny Power can remove proposals that do not pass the threshold review from further consideration.

#### Step 2: Evaluation Criteria

Proposals passing the threshold review are evaluated using a formal review and scoring process. Evaluation criteria are described below.

#### Step 3: Interviews

Top-ranked bidders may be invited to an interview. Presentations and answers to reviewer questions will be scored. Criteria will include:

- o Quality of presentation
- o Interaction and cohesiveness of the team
- o Responses to questions

Note that Allegheny Power reserves the right to forego this step should a single proposal be ranked in the technical review as clearly superior to others.

#### Step 4: Selection and Contract Negotiation

Allegheny Power will initially notify only the selected bidder(s) for the evaluation of the DR portfolios via E-mail. This notification will initiate the Agreement negotiation process. Should Allegheny Power and the selected bidder(s) be not able to quickly enter into an Agreement, Allegheny Power may terminate negotiations and initiate negotiations with the next ranked bidder(s).

### **7.2 Evaluation Scoring Matrix**

Allegheny Power will base their evaluation of proposals on the scoring matrix in Table 7.1. Brief descriptions of the criteria are provided below.

**Table 7.1: RFP Evaluation Criteria/Scoring Matrix**

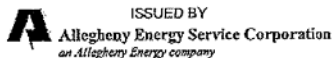
	<b>Approximate Weighted Percent</b>
<b>Part A: Technical Approach</b>	<b>30%</b>
1. Proposal quality	
2. Thoroughness and practicality of approach	
3. Clarity regarding Allegheny Powers Demand Response objectives and quality of proposed approach for meeting those objectives	
4. Best practice, innovation, and likelihood for success in accurately measuring impacts.	
5. Balancing of complex issues for conducting Demand Response for Allegheny Power	
<b>Part B: Organizational and Management Capability</b>	<b>30%</b>
1. Demonstrated competence and experience	
2. Management structure	
3. References	
4. Assigned staffing for prime and subcontractors	
Local presence	
<b>Part C: Cost (per individual item, as defined)</b>	<b>40%</b>
1. Initial Market Assessment – Firm Cost	
2. Curtailment Service Provider Yearly Cost Unit Cost – Customer Equipment Capacity and Energy Payment - % Split	
3. Demand Response Program – Allegheny Yearly Cost Unit Cost – Customer Equipment Capacity and Energy	
4. Load Resources Only - Price and volume: Committed Capacity (Load Reduction) - MW Capacity Price - \$/MW/Day	
5. Customer Demand Response (Control) Program	
<b>Total</b>	<b>100%</b>



**7.2.1 Technical Approach**

Included in this category will be an assessment of the overall quality of the proposal and the approach to achieving successful demand response start-up, planning, delivery, and reporting. This will include assessment of ability to achieve proposed program milestones and sub-tasks and achieve demand response results. Allegheny Power will award points based on the assessment of the quality of approach to the work scope, and proposed metrics and reporting approaches. Significant consideration will also be given to the overall thoughtfulness and creativity of the approach and means of allocating the budget between Tasks and Programs proposed in order to achieve high quality demand results that meet or exceed Allegheny Power's objectives.

**Purchase Order**



ISSUED BY  
**AllegHENY Energy Service Corporation**  
*an AllegHENY Energy company*  
 AGENT-FOR-BUYER  
 800 Cabin Hill Drive  
 Attn: Procurement  
 Greensburg, PA 15601-1650  
 FAX: (724) 830-7714

Page 1 of 3  
 PO# 4500212298

ROTH BROS INC  
 PO Box 4209  
 YOUNGSTOWN OH 44515-0209

**Your Vendor Number with us**  
 10031593

**Please Deliver to :**  
 Connellsville Distribution Center  
 West Penn Power Company  
 311 South Seventh Street  
 Connellsville PA 15425-3015

All material to Connellsville or Williamsport Distribution Centers must be delivered between 7:00 am and 11:00 am Monday through Friday only. For all other locations, deliveries must be made between 7:00 am and 3:00 pm Monday through Friday (unless otherwise specified on the purchase order). No U.S. holiday deliveries (including New Year's Day, President's Day, Good Friday, Memorial Day, July 4, Labor Day, Veterans' Day, Thanksgiving Day, and Christmas Day).

**IMPORTANT:** Invoice must be in purchase order unit of measure.

Buyer reserves the right to assign this contract, in whole or in part, to one or more of its affiliates, their successors or assigns at any time.

All Correspondence, Shipping Papers, Invoices, Bills of Lading and Packages must show the Stock Number, Purchase Order Number, and Work Order and Op Step Numbers (if applicable and as identified in the Purchase Order header text or item text).

ANY AGENT, REPRESENTATIVE, CONSULTANT OR CONTRACTOR PROVIDING SERVICES TO ALLEGHENY ENERGY IS EXPECTED TO FOLLOW ALLEGHENY ENERGY'S CODE OF BUSINESS CONDUCT AND ETHICS, WHICH IS AVAILABLE ON THE COMPANY'S WEBSITE, [www.allegHENYenergy.com](http://www.allegHENYenergy.com), IN THE CORPORATE GOVERNANCE SECTION. IT IS ALSO AVAILABLE AT [http://media.corporate-ir.net/media\\_files/nys/aye/corpgov/code4.pdf](http://media.corporate-ir.net/media_files/nys/aye/corpgov/code4.pdf).

This document, and any attached or referenced documents, may contain information proprietary to AllegHENY Energy Service Corporation, its affiliates, and parent. You agree that this document is to be used solely by you exclusively for the purpose for which it is furnished, and AESC requires it to be returned or destroyed when no longer required for that purpose. This document and any information obtained therefrom shall not be reproduced, transmitted, or disclosed in whole or in part to other organizations without the prior written authorization of AESC.

**IncoTerms :** SVC Freight Not Applicable N

**Currency :** USD

**Terms of Payment :** Within 60 days Due Net

This offer to purchase includes all the terms and conditions applicable to this purchase order. Acknowledgement is required for services or exceptions only. Shipment of goods will constitute your acceptance of this purchase order's terms and conditions.


AUTHORIZED BY: B M Crowe

Note : If it has been determined that the product purchased is a hazardous substance according to OSHA 1910.1200, 2 copies of the material safety data sheet for such product must be included with the shipping papers to the receiver of the product. If seller fails to supply such information, seller shall be considered to be in breach of contract.

Vendor Copy

**Bill and Mail Invoices to :**  
**Buying Company:**  
**West Penn Power Company**  
 Disbursement Accounting  
 800 Cabin Hill Drive  
 Greensburg, PA 15601-1650

**Purchase Order**  
**Purchasing Document Date**  
 4500212298 06-19-2009  
**Purchasing Buyer Telephone**  
**Fax number Our Reference**  
**E-Mail**

**Purchase Order**  
 ISSUED BY  

**Allegheny Energy Service Corporation**  
*an Allegheny Energy company*  
 AGENT-FOR-BUYER  
 800 Cabin Hill Drive  
 Attn: Procurement  
 Greensburg, PA 15601-1850  
 FAX: (724) 830-7714

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 PO# 4500212298

**Header text**

This purchase order is issued for the completion of an initial Market Assessment for Demand Response of Allegheny Power's commercial/industrial customer base per Scope of Work in Section 5.3.1 of Allegheny Power's "Request for Proposal for the Demand Response Provider for Non Residential Demand Response Programs per Pennsylvania Act 129, Version 1, dated May 14, 2009.

As part of this purchase order, Seller will not make any onsite visits to, or have any contact with, Allegheny Power customers.

Seller has confirmed that it is not affiliated with an Electric Distribution Company (EDC) through ownership, partial ownership or control. Affiliation or merger with an EDC by a Conservation Service Provider (CSP) at any time during the term of the contract will constitute a breach of the contract by the CSP and cause the termination of the contract. The CSP will immediately notify Allegheny Power of a merger and provide for automatic termination of the contract.

Seller is required to maintain registration with the PA PUC as an approved CSP during the term of the contract.

Incorporated by reference are the following:

1. PowerAdvocate bid event 18833, Demand Response Provider (Non-Residential)-BMC472-S, dated 05/15/09.
2. Roth Bros. proposal (Initial Market Assessment, Section 5.3.1 only) submitted via PowerAdvocate by Kevin Callahan and Gene Ameduri, as revised by email dated 06/16/09 from Gene Ameduri.

**PAYMENT TERMS NET 60 DAYS.**


Allegheny Energy Service Corporation General Terms and Conditions shall apply.

This purchase order is dependent upon the approval of the Energy Efficiency and Conservation Plan by the Pennsylvania Public Utility Commission.

Item	Material	Order Qty.	UOM	Unit Price	Per	Net Value
00010 US		1	AU	\$	1	\$
<b>Description :</b> Market Analysis for DR -PA						
<b>Required Date :</b> 12-31-2009						
Item text	Initial Market Assessment for Demand Response - PA Firm Price					
<b>Purch. Req. Number :</b> 10252560		<b>Purch. Req. Item :</b> 00010				
<b>Tax Code Description :</b> Direct Pay						
<b>The item covers the following services :</b>						
	<b>Service Item</b>	<b>Service Number</b>	<b>Service Description</b>	<b>Qty</b>	<b>UOM</b>	<b>Rate</b>
	10		Market Analysis for Demand Response-PA			\$

Note : If it has been determined that the product purchased is a hazardous substance according to OSHA 1910.1200, 2 copies of the material safety data sheet for such product must be included with the shipping papers to the receiver of the product. If seller fails to supply such information, seller shall be considered to be in breach of contract.

Vendor Copy

**Purchase Order**  
ISSUED BY  
 **Allegheny Energy Service Corporation**  
*an Allegheny Energy company*  
AGENT-FOR-BUYER  
800 Cabin Hill Drive  
Attn: Procurement  
Greensburg, PA 15601-1850  
FAX: (724) 630-7714

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Total Net Value

\$

End of Purchase Order

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Note : If it has been determined that the product purchased is a hazardous substance according to OSHA 1910.1200, 2 copies of the material safety data sheet for such product must be included with the shipping papers to the receiver of the product. If seller fails to supply such information, seller shall be considered to be in breach of contract.

Vendor Copy



## GENERAL TERMS AND CONDITIONS

1. **BUYER:** Each company for which materials ordered herein are to be used or for which services ordered herein are to be performed shall be the Buyer of those materials or services. No Buyer shall be liable to Seller for any obligation of any other Buyer hereunder.
2. **OFFER, ACCEPTANCE AND AMENDMENTS:** This purchase order is an offer by Buyer to Seller, is not an acceptance of the terms and conditions of any offer made by Seller to Buyer, and any such offer is expressly rejected. Acceptance of this offer is expressly limited to its terms. Upon acceptance by Seller, this purchase order becomes the final agreement between Seller and Buyer, constituting the entire contract and superseding all previous communications other oral or written. This purchase order may be modified only by a writing signed by Buyer.
3. **RESPONSIBILITY:** Seller in its performance hereunder shall at all times be an independent contractor and responsible for all acts or omissions (negligent or otherwise) of its agents, employees and subcontractors. Personnel employed by or representing Seller on Buyer's premises shall be subject to the continuing approval of Buyer and any worker who is unsatisfactory shall be removed at the request of Buyer. Furthermore, all subcontractors employed by Seller shall be subject to Buyer's continuing approval. Seller alone shall be and remain liable and responsible for the manner and methods by which work is performed and for materials, working force and equipment, irrespective of whether or not any changes are made as a result of any comments received from Buyer.
4. **EMPLOYMENT STANDARDS:** Seller agrees, unless exempt, to comply with the Federal Acquisition Regulations System (FAR) including, but not limited to, solicitation provisions and contract clauses in the following implementation provisions which are hereby incorporated by reference: Equal Employment Opportunity (48 C.F.R. § 22.28), Special Disabled and Vietnam Era Veterans (48 C.F.R. § 22.13, 41 C.F.R. 60-250.4(n)), Employment of the Handicapped (48 C.F.R. § 22.14, 41 C.F.R. 60-741.4(f)), Small Business and Small Disadvantaged Business Concerns (48 C.F.R. § 19.000-19.900), Pollution Control and Clean Air and Water (48 C.F.R. § 23.1). Seller further agrees by its acceptance of this purchase order to make certifications and periodic reports required by the FAR, and the laws and Executive Orders implemented by those regulations.
5. **SMALL BUSINESS STANDARDS:** Pursuant to the Small Business Act as amended (15 U.S.C. § 631 et seq.) and Utilization of Small Business Concerns (48 C.F.R. § 19.000-19.902, and § 52.219-6), Seller agrees to use its best efforts to carry out the policy stated in the said Act as amended so that small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals as defined in the Act have the maximum practicable opportunity to compete for subcontracts to the fullest extent consistent with the efficient performance of the contract.
6. **SAFETY AND HEALTH:** Seller shall take all precautions necessary and shall be solely responsible for the safety of the work and the safety and adequacy of the manner and methods it employs in performing the work and shall not require any employee or representative performing hereunder to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to health or safety. Seller shall conduct the work in conformance with all applicable safety and health laws, ordinances, rules, regulations, orders and all other requirements including those promulgated pursuant to OSHA and by Buyer when on Buyer's premises.
7. **PERMITS, LICENSES AND COMPLIANCE WITH THE LAW:** Seller shall obtain all licenses and permits that may be required by any governmental body or agency necessary to conduct Seller's business or to perform hereunder. Seller, Seller's subcontractors, and employees, agents and representatives of each in performance of work hereunder shall comply with all applicable governmental laws, ordinances, rules, regulations, orders and all other governmental requirements.
8. **INSURANCE:** Prior to rendering any service hereunder, Seller shall, at its own expense, procure and thereafter keep in effect until service has been performed: (a) Workers' Compensation Insurance for its employees engaged in this work sufficient to comply fully with requirements and coverages specified by laws of each jurisdiction in which work shall be performed; (b) Commercial General Liability Insurance providing limits of not less than \$3,000,000 combined single limit per occurrence for bodily injury and death and for property damage and including coverage for Contractual Liability, covering all liability of Seller under this purchase order and including Products-Completed Operations; (c) Comprehensive Automobile Liability Insurance (including owned, non-owned and hired vehicles), providing limits of not less than \$1,000,000 combined single limit per occurrence for bodily injury and death and including property damage; (d) such other specific insurances and/or limits determined by Buyer to be appropriate for work to be performed. Seller shall cause Buyer to be added as an additional insured on the policies of insurance and furnish Buyer (Attention: Exact Risk Manager) with certificates of insuring companies showing such insurance to be in effect and the expiration dates and agreeing to give thirty (30) days written notice to Buyer in advance of any change in or cancellation of such insurances.
9. **PROPRIETARY RIGHTS:** Seller shall defend, at its own expense, indemnify and hold harmless Buyer, Buyer's Agent and Buyer's Representative, and employees, agents and representatives of each against all costs and damages, including attorneys' fees, arising out of any action in which it is alleged that the materials or any use thereof constitutes a misappropriation or infringement of any patent, copyright, trade secret or any other proprietary rights. If Buyer, Buyer's Agent or Buyer's Representative is found to be liable for misappropriation or infringement in any use of the materials specified in this purchase order, Seller shall, at its own expense, either procure for Buyer, Buyer's Agent or Buyer's Representative the right to use the materials or alter or replace said materials with functionally equivalent materials that are acceptable to Buyer and pay all expenses sustained as a result of such alteration or replacement.
10. **PERFORMANCE:** Except as provided in Paragraph 11, if delivery of materials or rendering of services is not completed by the time specified in this purchase order, Buyer reserves the right, without liability in addition to its other rights and remedies at law or in equity, to cancel all or any part of this purchase order by notice effective when received by Seller as to materials not yet shipped or services not yet rendered.
11. **DELAY:** If, by reason of uncontrollable forces as defined herein, Buyer or Seller shall be unable to perform any of its obligations in whole or in part, and if within ten days after the occurrence thereof the party affected gives written notice to the other, then the obligations of both parties shall be suspended to the extent made necessary by such occurrence. The term "uncontrollable forces" as used herein, includes, but is not limited to, acts of God, fires, floods, explosions, strikes and other labor disputes, governmental regulations, acts or omissions of governmental authority, unusually severe weather, inability to obtain necessary permits and licenses, inability of Buyer to obtain adequate financing or other economic inoperability.
12. **SUSPENSION:** Seller, upon written notice from Buyer, shall suspend or stop temporarily performance hereunder.
13. **TERMINATION WITHOUT CAUSE:** Buyer may terminate this purchase order without cause at any time in whole or in part by written notification to Seller. Upon receipt of notice of termination, Seller shall, unless notified otherwise, immediately discontinue the work terminated, cease delivery and ordering of materials, and make reasonable efforts to cancel existing orders, contracts and subcontracts relating thereto upon terms satisfactory to Buyer. After receipt of notice of termination, Seller shall continue to perform such work as necessary to preserve and protect material and work in progress or in transit until relinquishing possession and control of same as provided in the notice of termination. Upon compliance with a notice of termination, Seller shall be entitled to be compensated for actual costs incurred and a reasonable, prorate profit for the actual costs incurred. Such termination shall be without prejudice to any claims which Buyer may have against Seller and this paragraph shall not apply if Buyer terminates for cause.
14. **TITLE AND RISK OF LOSS:** Title and risk of loss shall transfer from Seller to Buyer upon delivery of all materials ordered hereunder at the destination specified on the face of this purchase order. Every shipment and invoice shall be marked to show Buyer, Buyer's purchase order number and carrier by which the materials are to be shipped. Materials shipped C.O.D. without Buyer's written consent will not be accepted and will be at Seller's risk.
15. **TAXES:** Unless otherwise specified in this purchase order, the price of goods and services ordered herein shall not include any taxes and charges now or hereinafter imposed upon Seller by any federal, state or local government or any governmental agency of the United States or the government of any other country or subdivision thereof by reason of the agreement or performance by Seller hereunder. Buyer will execute and furnish to Seller Certificates of Exemption from state sales taxes upon request.
16. **PRICE INFORMATION:** Upon request, Seller shall provide Buyer with sufficient information relating to prices of materials and services to enable Buyer to comply with accounting regulations of the Federal Energy Regulatory Commission.
17. **PAYMENT:** Buyer shall make payment to Seller in accordance with the terms of this purchase order. Buyer reserves the right to retain 10% of the payments made on purchase orders for services as such payments are made hereunder. The 10% retained shall be paid to Seller when Buyer is satisfied that the interests of Buyer in the completed work have been protected. Such payment shall not be unreasonably withheld. No payment shall be evidence of satisfactory performance of this purchase order or shall be construed to be an acceptance of defective or nonconforming materials or services.
18. **RELEASES:** Seller shall give Buyer written notice of any claims, liens or encumbrances of any nature affecting or relating to the work to be performed hereunder. Buyer shall have the right prior to making final payment to Seller to require Seller to certify that no lien, claim or encumbrance related to the work is outstanding and to furnish releases from Seller's employees, subcontractors, suppliers and any other claimants in support thereof. If any lien is filed or Buyer receives any notice of a lien filed or to be filed to secure any claim arising out of any performance or omission in connection with the performance hereof, Seller shall, upon written demand by Buyer, promptly obtain and record a full release and discharge of such lien. If Seller fails to do so, Buyer may pay such claim from monies due or payable to Seller and obtain and record such release and discharge at Seller's expense.
19. **RIGHT TO AUDIT:** If the price stated in this purchase order is other than a firm price, Buyer shall have the right to inspect and audit all the books, records, correspondence, receipts, vouchers, and memoranda, etc., of Seller, Seller's subcontractors and other entity used by Seller in performing this purchase order. Seller, Seller's subcontractors and any other entity used by Seller in the performance of this purchase order shall preserve all such records for a period of two years after final payment hereunder. Seller shall provide for such right to audit by Buyer in all contracts with subcontractors and other entities relating to this purchase order.
20. **INSPECTION:** Buyer shall have the right from time to time to inspect the work in progress or completed at Seller's premises upon reasonable notice and on Buyer's premises without such notice. Any such inspection shall in no way relieve Seller of any of its obligations under this purchase order. Any such work disclosed by any such inspection not to be in conformity with the requirements of this purchase order shall, immediately following notification thereof, be corrected by Seller at Seller's expense. Seller shall provide safe access to such work and where necessary for such inspections shall provide scaffolds and ladders in place and such other equipment normal to conduct such inspections.
21. **ACCESS:** Personnel of Seller and subcontractors employed by Seller shall enter and exit Buyer's premises only by the special entrance designated from time to time by Buyer.
22. **WARRANTY:** In addition to, and not in limitation of, any other remedies provided herein or by law or in equity, Seller expressly warrants that the goods and/or services supplied hereunder will conform to Buyer's specifications in all respects and will be of good workmanship and quality, free from all defects (including defects in design and title) and fit for the purposes intended by Buyer. Upon failure of any of the materials and/or services supplied hereunder to conform to the above warranties, Seller shall, at Buyer's option and at no cost to Buyer, promptly repair or replace any item of material or correct or reperform any services so that they conform to the above warranties. The costs of transporting, repairing, replacing, removing or installing material to make materials and services comply with the above warranty shall be borne by Seller.
23. **INDEMNIFICATION:** To the fullest extent permitted by law and regardless of whether or not caused by the negligence of a party indemnified herein, Seller shall indemnify, save harmless and defend (Indemnity Obligation) Buyer, Buyer's Agent, Buyer's Representative and employees, agents, directors, officers and representatives of each, from all claims, losses, liabilities and expenses, including (Indemnity Obligation) Buyer, Buyer's Agent, Buyer's Representative and employees, agents and representatives of each, arising out of or in any way connected with Seller or Seller's attorneys' fees, growing out of personal injury, death or damage to property (including property of Buyer, Buyer's Agent or Buyer's Representative) suffered or claimed to have been suffered by any person (including subcontractors, and employees, agents and representatives of each, subcontractors, and employees, agents and representatives of each, subcontractors, and employees, agents and representatives of each), unless due to the sole negligence of Buyer, Buyer's Agent, Buyer's Representative or employees, agents and representatives of each. Seller intends that its Indemnity Obligation to each party indemnified herein for claims related to or brought by anyone directly or indirectly employed by Seller or Seller's subcontractors shall not be limited in any way by any provision of any workers' compensation act, disability benefits act or other employee benefit act, and Seller hereby waives immunity under such acts to the extent such acts would bar recovery under, or full enforcement of, Seller's Indemnity Obligation.
24. **ASSIGNMENT:** No right or interest in this purchase order shall be assigned by Seller, and no delegation or subcontracting of any obligation of Seller hereunder shall be made without written permission of Buyer. Any attempted assignment, delegation or subcontracting without such approval shall be void.
25. **WAIVER:** Buyer's failure to insist on any right shall not operate as a waiver unless agreed to in writing by Buyer.
26. **CONFLICTS:** In the event of any conflict among the documents incorporated into this purchase order, Buyer's specifications and special terms shall prevail over Seller's proposal.
27. **VALIDITY:** In the event that any paragraph(s) or any part of these General Terms and Conditions shall be found to be contrary to law and invalid, all other paragraphs and the remaining part of any paragraph(s) shall be and remain in full force and effect and shall be binding upon the parties hereto.
28. **APPLICABLE LAW:** The validity, interpretation and performance of this purchase order shall be governed by the laws of the Commonwealth of Pennsylvania.

**Purchase Order**  
 ISSUED BY  
 **Allegheny Energy Service Corporation**  
*an Allegheny Energy company*  
 AGENT-FOR-BUYER  
 800 Cabin Hill Drive  
 Attn: Procurement  
 Greensburg, PA 15601-1650  
 FAX: (724) 650-7714

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 PO# 4500212298

ALLEGHENY ENERGY SERVICE CORP.  
 800 CABIN HILL DRIVE  
 ATTN: PROCUREMENT  
 GREENSBURG, PA 15601-1650

Your Vendor Number with us  
 10031593

Please Deliver to :  
 Connellsville Distribution Center  
 West Penn Power Company  
 311 South Seventh Street  
 Connellsville PA 15425-3015

All material to Connellsville or Williamsport Distribution Centers must be delivered between 7:00 am and 11:00 am Monday through Friday only. For all other locations, deliveries must be made between 7:00 am and 3:00 pm Monday through Friday (unless otherwise specified on the purchase order). No U.S. holiday deliveries (including New Year's Day, President's Day, Good Friday, Memorial Day, July 4, Labor Day, Veterans' Day, Thanksgiving Day, and Christmas Day).

IMPORTANT: Invoice must be in purchase order unit of measure.  
 Buyer reserves the right to assign this contract, in whole or in part, to one or more of its affiliates, their successors or assigns at any time.

All Correspondence, Shipping Papers, Invoices, Bills of Lading and Packages must show the Stock Number, Purchase Order Number, and Work Order and Op Step Numbers (if applicable and as identified in the Purchase Order header text or item text).

ANY AGENT, REPRESENTATIVE, CONSULTANT OR CONTRACTOR PROVIDING SERVICES TO ALLEGHENY ENERGY IS EXPECTED TO FOLLOW ALLEGHENY ENERGY'S CODE OF BUSINESS CONDUCT AND ETHICS, WHICH IS AVAILABLE ON THE COMPANY'S WEBSITE, [www.alleghenyenergy.com](http://www.alleghenyenergy.com), IN THE CORPORATE GOVERNANCE SECTION. IT IS ALSO AVAILABLE AT [http://media.corporate-ir.net/media\\_files/iys/ayo/corpgov/code4.pdf](http://media.corporate-ir.net/media_files/iys/ayo/corpgov/code4.pdf).

This document, and any attached or referenced documents, may contain information proprietary to Allegheny Energy Service Corporation, its affiliates, and parent. You agree that this document is to be used solely by you exclusively for the purpose for which it is furnished, and AESC requires it to be returned or destroyed when no longer required for that purpose. This document and any information obtained therefrom shall not be reproduced, transmitted, or disclosed in whole or in part to other organizations without the prior written authorization of AESC.

Currency : USD

IncoTerms : SVC Freight Not Applicable N

\*\* AN ACKNOWLEDGEMENT COPY IS TO BE RETURNED WITHIN 10 DAYS FOR \*\*  
 \*\* ALL PURCHASE ORDERS INVOLVING SERVICES OR EXCEPTIONS ONLY. \*\*


*Don Amadori* (SELLER'S SIGNATURE)      *Roth/Enclosure* (COMPANY)      \_\_\_\_\_ (PHONE NO)      *6/25/09* (DATE)

\_\_\_\_\_  
 (SELLER'S ORDER NO)      \_\_\_\_\_  
 (SHIP DATE)

Note : If it has been determined that the product purchased is a hazardous substance according to OSHA 1910.1200, 2 copies of the material safety data sheet for such product must be included with the shipping papers to the receiver of the product. If seller fails to supply such information, seller shall be considered to be in breach of contract.

Acknowledgement Copy for Exceptions or Services Only

<b>Seller :</b>	
ROTH BROS INC PO Box 4209 YOUNGSTOWN OH 44515-0209	
<b>Purchase Order</b>	
Purchasing Document	Date
4500212298	06-19-2009
Purchasing Buyer	Telephone
Fax number	Our Reference
E-Mail	

**Purchase Order**  
 ISSUED BY  

**Allegheny Energy Service Corporation**  
*an Allegheny Energy company*  
 AGENT-FOR-BUYER  
 800 Cabin Hill Drive  
 Attn: Procurement  
 Greensburg, PA 15601-1605  
 FAX: (724) 830-5692

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 PO# 4500212298

Terms of Payment : Within 60 days Due Net

Header text

This purchase order is issued for the completion of an initial Market Assessment for Demand Response of Allegheny Power's commercial/industrial customer base per Scope of Work in Section 5.3.1 of Allegheny Power's "Request for Proposal for the Demand Response Provider for Non Residential Demand Response Programs per Pennsylvania Act 129, Version 1, dated May 14, 2009.

As part of this purchase order, Seller will not make any onsite visits to, or have any contact with, Allegheny Power customers.

Seller has confirmed that it is not affiliated with an Electric Distribution Company (EDC) through ownership, partial ownership or control. Affiliation or merger with an EDC by a Conservation Service Provider (CSP) at any time during the term of the contract will constitute a breach of the contract by the CSP and cause the termination of the contract. The CSP will immediately notify Allegheny Power of a merger and provide for automatic termination of the contract.

Seller is required to maintain registration with the PA PUC as an approved CSP during the term of the contract.

Incorporated by reference are the following:

1. PowerAdvocate bid event 18833, Demand Response Provider (Non-Residential)-BMC472-S, dated 05/15/09.
2. Roth Bros. proposal (initial Market Assessment, Section 5.3.1 only) submitted via PowerAdvocate by Kevin Callahan and Gene Ameduri, as revised by email dated 06/16/09 from Gene Ameduri.

PAYMENT TERMS NET 60 DAYS.

Allegheny Energy Service Corporation General Terms and Conditions shall apply.

This purchase order is dependent upon the approval of the Energy Efficiency and Conservation Plan by the Pennsylvania Public Utility Commission.

Item	Material	Order Qty.	UOM	Unit Price	Per	Net Value
00010 US		1	AU	\$	1	\$
Description : Market Analysis for DR -PA Required Date : 12-31-2009 Item text Initial Market Assessment for Demand Response - PA Firm Price \$						
Purch. Req. Number : 10252560		Purch. Req. Item : 00010				
Tax Code Description : Direct Pay						
The item covers the following services :						
Service Item	Service Number	Service Description	Qty	UOM	Rate	

Note : If it has been determined that the product purchased is a hazardous substance according to OSHA 1910.1200, 2 copies of the material safety data sheet for such product must be included with the shipping papers to the receiver of the product. If seller fails to supply such information, seller shall be considered to be in breach of contract.

Acknowledgement Copy for Exceptions or Services Only

*M/0*

**Purchase Order**

**A** ISSUED BY  
**Allegheny Energy Service Corporation**  
*an Allegheny Energy company*

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 PO# 4500212298

AGENT-FOR-BUYER  
 800 Cabin Hill Drive  
 Altic Procurement  
 Greensburg, PA 15601-1605  
 FAX: (724) 830-5692

Item	Material	Order Qty.	UOM	Unit Price	Per	Net Value
10					AU	\$
Total Net Value						\$

**End of Purchase Order**

Note : If it has been determined that the product purchased is a hazardous substance according to OSHA 1910.1200, 2 copies of the material safety data sheet for such product must be included with the shipping papers to the receiver of the product. If seller fails to supply such information, seller shall be considered to be in breach of contract.

Acknowledgement Copy for Exceptions or Services Only



**D. Program by program calculation of savings and costs for each program year. Include separate sections for each program with sub-sections for each year describing savings and costs information. Cost data should include for each program (and for General Administrative Cost Areas of Planning, Evaluation and Other) and each program year separate budgets for (see Example Tables 6A, 6B, and 6C):**

- **Direct Program Costs**
  - EDC labor and expenses
  - EDC materials and supplies
  - CSP labor
  - CSP materials and supplies
  - Other outside services (define)
  - Customer incentives
  - Other (define)

Allegheny follows specific methodologies and procedures for the allocation of the cost of shared assets, employees, and services among Allegheny's entities. These methodologies and procedures have been developed to be consistent with applicable state and federal regulatory requirements, to protect ratepayers and to ensure the integrity of the financial information presented for each entity within the Allegheny Energy, Inc.'s holding company system. In addition, there are Sarbanes Oxley controls in place that specifically address the issue of appropriate cost allocation among the entities within SAP.

The Federal Energy Regulatory Commission recently completed an audit of Allegheny Energy Service Corporation's reporting and allocation methodologies in 2008. Allegheny's entities are also audited periodically by the State Commissions.

Allegheny Power is using SAP (System Applications Product) to track actual internal and external program costs. Cost objects have been created to accurately capture all costs incurred related to PA Act 129. There are controls in place to ensure that all costs charged to these cost objects are accurate. Each month, reports are run and costs are analyzed by Corporate Accounting, Internal Auditors and a Financial Support Specialist in the Customer Services area.

The costs incurred related to Act 129 include internal labor and overheads, employee expenses, outside services, advertising and other miscellaneous expenses. These dollars are tracked for labor, outside services, etc., for each program and measures within the plan. All outside services invoices are reviewed by the departments responsible for procuring the service. A summary report of these costs is prepared each month for management's review.

All costs and labor incurred related to planning and program development, cost benefit analysis, measurement and verification, and reporting will be captured using these SAP cost objects.

See Tables 7A through 7E for program by program calculations of savings and costs for each year. See Tables 6A and 6B as follows for program specific costs by cost element. See section 10.E. for a description of cost elements.

- **Administrative Costs, including but not limited to costs relating to plan and program development, cost-benefit analysis, measurement and verification, and reporting.**

Allegheny Power calculated administrative costs by estimating costs associated with specific activities, utilizing price quotations and by using actual charges year to date to establish program development costs. Administrative costs include start-up costs such as information technology (IT), database and web portal development, and program development. IT, database and web portal development costs were estimated based on IT requirements that were identified specific to the proposed EE&C and DR programs. Other administrative costs include costs for program development costs, with this component based on actual charges year to date. See Tables 6A and 6B as follows for the common and specific costs for administration.

- **Total costs.**

Table 6A: Portfolio-Specific Assignment of EE&C Costs

Residential Portfolio (including Low-Income)							
EE&C Program	Cost Elements (\$)						Totals
	Administration Costs	Marketing Costs	Outside Services Costs	Evaluation Costs	Customer Incentive Costs	Utility Capital Equipment Costs	
CFL Rewards Program	\$0	\$0	\$0	\$0	\$1,503,787	\$0	\$1,503,787
Critical Peak Rebate Rate Offering	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Energy Star Appliance Program	\$0	\$0	\$5,165,663	\$0	\$5,440,256	\$0	\$10,605,918
Home Performance Program	\$391,805	\$0	\$3,300,154	\$0	\$6,542,005	\$0	\$10,233,963
Low Income Home Performance Check-Up & Appliance Replacement Program	\$17,798	\$0	\$512,273	\$0	\$4,217,710	\$0	\$4,747,781
Low Income Joint Utility Usage Management Program	\$41,781	\$0	\$512,273	\$0	\$5,167,398	\$0	\$5,721,452
Low Income Room Air Conditioner Replacement Program	\$6,526	\$0	\$0	\$0	\$1,152,914	\$0	\$1,159,439
Programmable Controllable Thermostat Demand Response Program	\$0	\$0	\$0	\$0	\$906,988	\$0	\$906,988
Residential HVAC Efficiency Program	\$0	\$0	\$0	\$0	\$1,798,179	\$0	\$1,798,179
Residential Rewards - Pay Ahead Services Rate Offerings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
							\$0
<b>Totals</b>	<b>\$457,909</b>	<b>\$0</b>	<b>\$9,490,363</b>	<b>\$0</b>	<b>\$26,729,236</b>	<b>\$0</b>	<b>\$36,677,508</b>

Table 6A: Portfolio-Specific Assignment of EE&C Costs

Small Commercial/Industrial Portfolio							
EE&C Program	Cost Elements (\$)						Totals
	Administration Costs	Marketing Costs	Outside Services Costs	Evaluation Costs	Customer Incentive Costs	Utility Capital Equipment Costs	
Commercial HVAC Efficiency Program	\$0	\$0	\$0	\$0	\$928,884	\$0	\$928,884
Commercial Lighting Efficiency Program	\$0	\$0	\$0	\$0	\$10,834,735	\$0	\$10,834,735
Custom Commercial Program	\$0	\$0	\$537,613	\$0	\$2,681,390	\$0	\$3,219,003
Time of Use - Hourly Rate Offerings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
							\$0
<b>Totals</b>	<b>\$0</b>	<b>\$0</b>	<b>\$537,613</b>	<b>\$0</b>	<b>\$14,445,009</b>	<b>\$0</b>	<b>\$14,982,622</b>

Large Commercial/Industrial Portfolio							
EE&C Program	Cost Elements (\$)						Totals
	Administration Costs	Marketing Costs	Outside Services Costs	Evaluation Costs	Customer Incentive Costs	Utility Capital Equipment Costs	
Commercial & Industrial Custom Applications Program	\$0	\$0	\$413,736	\$0	\$4,939,000	\$0	\$5,352,736
Customer Load Response Program	\$685,134	\$0	\$0	\$0	\$1,133,105	\$0	\$1,818,239
Customer Resources for Demand Response	\$20,000	\$0	\$0	\$0	\$1,938,250	\$0	\$1,958,250
Distributed Generation Program	\$0	\$0	\$0	\$0	\$379,718	\$0	\$379,718
Variable Frequency Drives Program	\$0	\$0	\$0	\$0	\$2,139,528	\$0	\$2,139,528
							\$0
<b>Totals</b>	<b>\$705,134</b>	<b>\$0</b>	<b>\$413,736</b>	<b>\$0</b>	<b>\$10,529,601</b>	<b>\$0</b>	<b>\$11,648,471</b>

Table 6A: Portfolio-Specific Assignment of EE&C Costs

Governmental/Non-Profit Portfolio							
EE&C Program	Cost Elements (\$)						Totals
	Administration Costs	Marketing Costs	Outside Services Costs	Evaluation Costs	Customer Incentive Costs	Utility Capital Equipment Costs	
Governmental/Non-Profit Lighting Program	\$0	\$0	\$0	\$0	\$3,933,464	\$0	\$3,933,464
							\$0
<b>Totals</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,933,464</b>	<b>\$0</b>	<b>\$3,933,464</b>

**Table 6B: Allocation of Common Costs to Applicable Customer Sector**

Common Cost Element	Total Cost (\$)	Basis for Cost Allocation	Class Cost Allocation (\$)			
			Residential (Including Low-Income)	Commercial/Industrial -- Small	Commercial/Industrial -- Large	Governmental/Non-profit
<i>Administration Costs</i>	\$12,350,100	Energy usage, program level and measure share allocation	\$5,305,329	\$3,019,079	\$3,246,690	\$779,002
<i>Marketing Costs</i>	\$9,726,523	Program and measure level marketing plan	\$8,852,571	\$471,750	\$100,282	\$301,920
<i>Outside Services Costs</i>	\$637,560	Program requirements and participation levels	\$606,249	\$29,845	\$895	\$571
<i>Evaluation Costs</i>	\$4,280,266	Program level EMV plan	\$2,448,987	\$917,540	\$356,270	\$557,470
<i>Customer Incentive Costs</i>	\$0		\$0	\$0	\$0	\$0
<i>Utility Capital Equipment Costs</i>	\$0		\$0	\$0	\$0	\$0
<b>Totals</b>	\$26,994,449		\$17,213,136	\$4,438,213	\$3,704,138	\$1,638,962

**Table 6C: Summary of Portfolio EE&C Costs**

Portfolio	Total Sector Portfolio-specific Costs	Total Common Costs	Total of All Costs
Residential (Including Low-Income)	\$36,677,508	\$17,213,136	\$53,890,644
Commercial/Industrial -- Small	\$14,982,622	\$4,438,213	\$19,420,835
Commercial/Industrial -- Large	\$11,648,471	\$3,704,138	\$15,352,608
Governmental/Non-profit	\$3,933,464	\$1,638,962	\$5,572,427
<b>Totals</b>	\$67,242,065	\$26,994,449	\$94,236,514

- Cost effectiveness calculations by program and by program year, indicating benefits by category (see Example Table 7A – 7E).

Table 7A: TRC Benefits Table

Residential	TRC Benefits By Program Per Year (\$000)												
	Program	Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity Annual		Energy Annual		Load Reductions in kW		MWh Saved	
						Generation	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime
CFL Rewards Program	1	-118,202	\$630,798	\$512,596	\$1,439	\$192,644	\$124,562	\$193,950	19	19	7,002	7,002	
	2	\$1,361,795	\$1,206,600	\$2,568,455	\$5,966	\$877,441	\$670,673	\$1,014,375	68	87	24,960	31,963	
	3	\$4,860,631	\$1,965,628	\$6,826,259	\$9,442	\$2,211,425	\$1,829,200	\$2,776,192	131	218	48,153	80,116	
	4	\$9,146,141	\$1,802,065	\$10,948,206	\$2,201	\$3,461,959	\$2,905,321	\$4,578,726	122	339	44,743	124,859	
	5	\$11,855,238	\$0	\$11,855,238	\$2,318	\$3,492,230	\$3,256,813	\$5,103,878	0	339	0	124,859	
	6	\$9,701,235	\$0	\$9,701,235	\$2,441	\$2,824,297	\$2,682,167	\$4,192,330	0	339	0	95,892	
	7	\$7,900,072	\$0	\$7,900,072	\$2,426	\$2,333,697	\$2,187,582	\$3,376,367	0	320	0	75,244	
	8	\$6,386,979	\$0	\$6,386,979	\$2,013	\$1,937,018	\$1,734,677	\$2,713,271	0	252	0	59,309	
	9	\$3,144,594	\$0	\$3,144,594	\$1,021	\$982,443	\$835,913	\$1,325,217	0	122	0	28,566	
Critical Peak Rebate Rate Offering	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
	2	-\$99,662	\$117,573	\$17,911	\$12,516	\$1,001	\$4,394	\$0	182	182	36	36	
	3	\$88,543	\$121,178	\$209,720	\$120,907	\$15,394	\$73,420	\$0	2,788	2,788	558	558	
	4	\$230,924	\$123,030	\$353,954	\$61,703	\$52,756	\$239,495	\$0	9,513	9,513	1,903	1,903	
Energy Star Appliance Program	1	-\$1,596,717	\$1,903,939	\$307,222	\$77,811	\$84,251	\$85,047	\$60,114	1,029	1,029	3,062	3,062	
	2	-\$3,833,809	\$5,343,409	\$1,509,600	\$333,359	\$390,877	\$465,040	\$320,323	3,825	4,854	11,176	14,239	
	3	-\$4,842,235	\$8,584,563	\$3,742,329	\$535,557	\$1,008,969	\$1,301,302	\$896,501	7,497	12,351	22,315	36,553	
	4	-\$2,436,478	\$7,867,034	\$5,430,556	\$129,028	\$1,635,929	\$2,122,353	\$1,543,245	7,542	19,894	22,448	59,001	
	5	\$6,691,404	-\$809,140	\$5,882,263	\$135,867	\$1,650,233	\$2,375,321	\$1,720,842	0	19,894	0	59,001	
	6	\$6,891,627	-\$827,155	\$6,064,472	\$139,114	\$1,681,557	\$2,471,602	\$1,772,199	0	19,344	0	57,093	
	7	\$6,385,393	-\$845,572	\$5,539,821	\$131,410	\$1,556,399	\$2,279,076	\$1,572,936	0	17,353	0	50,182	
	8	\$4,981,023	-\$864,398	\$4,116,624	\$106,431	\$1,184,811	\$1,707,898	\$1,117,484	0	13,347	0	36,277	
	9	\$3,486,371	-\$883,644	\$2,602,727	\$78,233	\$766,557	\$1,121,110	\$636,826	0	9,317	0	22,289	
	10	\$3,585,458	-\$903,318	\$2,682,141	\$82,380	\$807,215	\$1,147,162	\$645,384	0	9,317	0	22,289	
	11	\$3,603,223	-\$923,430	\$2,679,793	\$86,171	\$847,518	\$1,117,746	\$628,358	0	9,255	0	22,223	
	12	\$3,565,622	-\$894,922	\$2,670,700	\$86,231	\$849,294	\$1,113,013	\$622,162	0	8,796	0	21,148	
	13	\$3,081,144	-\$733,188	\$2,347,956	\$77,325	\$745,913	\$957,107	\$567,610	0	7,490	0	17,638	
	14	\$1,881,588	-\$375,877	\$1,505,711	\$56,710	\$484,443	\$560,289	\$404,269	0	5,217	0	10,878	
	15	\$585,859	\$0	\$585,859	\$35,771	\$191,822	\$148,951	\$209,315	0	3,125	0	4,090	
	16	\$260,254	\$0	\$260,254	\$27,955	\$133,424	\$42,213	\$56,663	0	2,319	0	2,702	
	17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	1,196	0	1,034	
	18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	600	0	519	
Home Performance Program	1	-\$1,621,820	\$1,775,163	\$153,343	\$16,662	\$51,512	\$33,307	\$51,862	220	220	1,872	1,872	
	2	-\$2,660,727	\$4,869,376	\$2,208,649	\$184,922	\$692,960	\$529,664	\$801,103	2,472	2,693	23,370	25,243	
	3	-\$3,092,223	\$7,032,716	\$3,940,493	\$206,641	\$1,211,289	\$1,001,929	\$1,520,635	3,507	4,766	32,704	43,883	
	4	-\$1,672,779	\$6,946,759	\$5,273,980	\$41,626	\$1,654,868	\$1,388,787	\$2,188,699	3,095	6,418	29,950	59,685	
	5	\$4,348,614	\$0	\$4,348,614	\$33,920	\$1,271,240	\$1,185,543	\$1,857,911	0	4,967	0	45,451	
	6	\$4,261,009	\$0	\$4,261,009	\$35,718	\$1,230,408	\$1,168,489	\$1,826,394	0	4,967	0	41,776	
	7	\$4,135,621	\$0	\$4,135,621	\$37,372	\$1,211,003	\$1,135,181	\$1,752,065	0	4,935	0	39,046	
	8	\$3,988,853	\$0	\$3,988,853	\$37,834	\$1,198,627	\$1,073,418	\$1,678,973	0	4,745	0	36,700	
	9	\$3,556,013	\$0	\$3,556,013	\$36,623	\$1,099,895	\$935,847	\$1,483,648	0	4,362	0	31,981	
	10	\$3,117,083	\$0	\$3,117,083	\$35,157	\$986,291	\$816,248	\$1,279,387	0	3,976	0	27,233	
	11	\$3,122,536	\$0	\$3,122,536	\$37,020	\$1,038,604	\$797,899	\$1,249,012	0	3,976	0	27,233	
	12	\$3,259,141	\$0	\$3,259,141	\$38,983	\$1,093,691	\$837,677	\$1,288,791	0	3,976	0	27,233	
	13	\$3,278,090	\$0	\$3,278,090	\$39,100	\$1,097,054	\$841,664	\$1,300,273	0	3,787	0	25,941	
	14	\$2,653,539	\$0	\$2,653,539	\$31,955	\$896,781	\$671,827	\$1,052,976	0	2,940	0	20,137	
	15	\$1,168,675	\$0	\$1,168,675	\$14,402	\$404,615	\$291,682	\$457,975	0	1,258	0	8,628	
Programmable Controllable Thermostat Demand Response Program	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
	2	-\$253,782	\$271,693	\$17,911	\$12,516	\$1,001	\$4,394	\$0	182	182	36	36	
	3	-\$51,048	\$260,769	\$209,720	\$120,907	\$15,394	\$73,420	\$0	2,788	2,788	558	558	
	4	\$131,113	\$222,841	\$353,954	\$61,703	\$52,756	\$239,495	\$0	9,513	9,513	1,903	1,903	
	5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
Residential HVAC Efficiency Program	1	-\$487,740	\$513,592	\$25,852	\$13,284	\$4,475	\$5,465	\$2,628	176	176	163	163	
	2	-\$957,938	\$1,140,341	\$182,403	\$84,882	\$31,420	\$45,111	\$20,990	1,060	1,236	982	1,145	
	3	-\$1,345,675	\$1,774,524	\$428,849	\$146,093	\$86,123	\$134,189	\$62,445	2,133	3,369	1,976	3,120	
	4	-\$1,205,869	\$1,708,543	\$502,674	\$35,772	\$141,613	\$213,260	\$112,028	2,146	5,515	1,987	5,107	
	5	\$542,515	\$0	\$542,515	\$37,668	\$142,852	\$236,933	\$125,062	0	5,515	0	5,107	
	6	\$577,326	\$0	\$577,326	\$39,665	\$150,428	\$254,746	\$132,487	0	5,515	0	5,107	
	7	\$597,342	\$0	\$597,342	\$41,767	\$158,407	\$264,031	\$133,137	0	5,515	0	5,107	
	8	\$611,682	\$0	\$611,682	\$43,981	\$166,809	\$264,854	\$136,039	0	5,515	0	5,107	
	9	\$625,525	\$0	\$625,525	\$46,312	\$175,656	\$264,946	\$138,610	0	5,515	0	5,107	
	10	\$641,477	\$0	\$641,477	\$48,766	\$184,973	\$266,518	\$141,220	0	5,515	0	5,107	
	11	\$643,913	\$0	\$643,913	\$51,351	\$194,784	\$260,066	\$137,712	0	5,515	0	5,107	
	12	\$686,875	\$0	\$686,875	\$54,072	\$205,115	\$284,898	\$142,790	0	5,515	0	5,107	
	13	\$718,445	\$0	\$718,445	\$56,879	\$214,411	\$296,605	\$150,551	0	5,510	0	5,070	
	14	\$719,636	\$0	\$719,636	\$59,515	\$215,717	\$296,675	\$147,728	0	5,475	0	4,844	
	15	\$655,416	\$0	\$655,416	\$59,925	\$199,958	\$266,762	\$128,771	0	5,235	0	4,264	
	16	\$200,537	\$0	\$200,537	\$49,891	\$150,646	\$0	\$0	0	4,139	0	3,051	
	17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	2,076	0	1,530	
Residential Rewards - Pay Ahead Services Rate Offerings	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
	2	-\$104,635	\$117,573	\$12,937	\$1,802	\$6,311	\$4,824	\$0	26	26	230	230	
	3	\$73,632	\$121,178	\$194,810	\$17,410	\$97,090	\$80,309	\$0	402	402	3,517	3,517	
	4	\$497,831	\$123,030	\$620,861	\$8,885	\$332,738	\$279,238	\$0	1,370	1,370	12,001	12,001	

Table 7B: TRC Benefits Table

Residential Low-Income		TRC Benefits By Program Per Year (\$000)											
Program	Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity Annual		Energy Annual		Load Reductions in kW		MWh Saved		
					Generation	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime	
					<b>Low Income Home Performance Check-Up &amp; Appliance Replacement Program</b>	1	-\$129,616	\$161,966	\$32,350	\$5,471	\$10,130	\$6,550	\$10,199
	2	-\$5,555	\$343,541	\$337,986	\$48,687	\$99,061	\$75,717	\$114,521	637	709	3,240	3,609	
	3	\$195,314	\$263,786	\$459,100	\$41,780	\$135,382	\$111,982	\$169,956	255	964	1,296	4,905	
	4	\$282,762	\$257,211	\$539,973	\$7,736	\$168,334	\$141,268	\$222,635	229	1,193	1,167	6,071	
	5	\$584,480	\$0	\$584,480	\$8,146	\$169,806	\$158,359	\$248,170	0	1,193	0	6,071	
	6	\$622,628	\$0	\$622,628	\$8,578	\$178,812	\$169,813	\$265,425	0	1,193	0	6,071	
	7	\$607,064	\$0	\$607,064	\$8,485	\$176,876	\$165,802	\$255,902	0	1,120	0	5,703	
	8	\$268,976	\$0	\$268,976	\$3,858	\$80,429	\$72,028	\$112,661	0	484	0	2,463	
	9	\$130,295	\$0	\$130,295	\$1,924	\$40,119	\$34,135	\$54,116	0	229	0	1,167	
<b>Low Income Joint Utility Usage Management Program</b>	1	-\$350,189	\$397,946	\$47,756	\$4,761	\$16,204	\$10,477	\$16,314	63	63	589	589	
	2	-\$1,426,443	\$1,789,105	\$362,662	\$30,418	\$113,766	\$86,957	\$131,520	380	443	3,555	4,144	
	3	-\$1,021,289	\$1,713,996	\$692,708	\$35,779	\$213,112	\$176,278	\$267,538	382	825	3,576	7,721	
	4	-\$1,461,400	\$2,461,514	\$1,000,114	\$7,846	\$313,831	\$263,371	\$415,067	385	1,210	3,598	11,319	
	5	\$1,082,743	\$0	\$1,082,743	\$8,262	\$316,575	\$295,234	\$462,672	0	1,210	0	11,319	
	6	\$1,153,496	\$0	\$1,153,496	\$8,700	\$333,366	\$316,589	\$494,841	0	1,210	0	11,319	
	7	\$1,197,167	\$0	\$1,197,167	\$9,161	\$351,047	\$329,068	\$507,891	0	1,210	0	11,319	
	8	\$1,228,173	\$0	\$1,228,173	\$9,646	\$369,667	\$331,051	\$517,809	0	1,210	0	11,319	
	9	\$1,255,736	\$0	\$1,255,736	\$10,158	\$389,273	\$331,214	\$525,091	0	1,210	0	11,319	
	10	\$1,224,388	\$0	\$1,224,388	\$10,139	\$388,589	\$321,594	\$504,066	0	1,147	0	10,730	
	11	\$820,003	\$0	\$820,003	\$7,139	\$273,615	\$210,203	\$329,046	0	767	0	7,174	
	12	\$429,206	\$0	\$429,206	\$3,770	\$144,495	\$110,671	\$170,271	0	385	0	3,598	
<b>Low Income Room Air Conditioner Replacement Program</b>	1	-\$106,905	\$110,008	\$3,103	\$1,421	\$591	\$778	\$314	19	19	21	21	
	2	-\$161,487	\$183,451	\$21,964	\$9,014	\$4,116	\$6,361	\$2,472	112	131	128	150	
	3	-\$114,021	\$149,926	\$35,906	\$10,493	\$7,631	\$12,808	\$4,973	111	242	127	276	
	4	-\$97,681	\$136,926	\$39,245	\$2,277	\$11,120	\$17,764	\$8,085	109	351	125	401	
	5	\$42,326	\$0	\$42,326	\$2,398	\$11,217	\$19,678	\$9,033	0	351	0	401	
	6	\$45,025	\$0	\$45,025	\$2,525	\$11,812	\$21,176	\$9,513	0	351	0	401	
	7	\$46,456	\$0	\$46,456	\$2,658	\$12,439	\$21,927	\$9,432	0	351	0	401	
	8	\$47,523	\$0	\$47,523	\$2,799	\$13,098	\$21,974	\$9,651	0	351	0	401	
	9	\$48,585	\$0	\$48,585	\$2,948	\$13,793	\$21,981	\$9,864	0	351	0	401	
	10	\$49,695	\$0	\$49,695	\$3,104	\$14,525	\$21,978	\$10,089	0	351	0	401	
	11	\$47,160	\$0	\$47,160	\$3,093	\$14,476	\$20,286	\$9,305	0	332	0	380	
	12	\$33,549	\$0	\$33,549	\$2,155	\$10,084	\$14,909	\$6,402	0	220	0	251	
	13	\$17,513	\$0	\$17,513	\$1,126	\$5,269	\$7,729	\$3,390	0	109	0	125	

Table 7C: TRC Benefits Table

o Submit yearly projections for each program thru final year of that program for TRC evaluation.

Commercial/Industrial Small		TRC Benefits By Program Per Year (\$000)										
Program	Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity Annual		Energy Annual		Load Reductions in kW		MWh Saved	
					Generation	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime
Commercial HVAC Efficiency Program	1	-\$414,119	\$428,831	\$14,712	\$5,996	\$2,352	\$2,967	\$3,398	79	79	142	142
	2	-\$596,068	\$703,537	\$107,470	\$38,506	\$16,572	\$24,814	\$27,578	482	561	860	1,001
	3	-\$842,831	\$1,112,214	\$269,383	\$66,559	\$45,628	\$74,279	\$82,917	975	1,536	1,740	2,742
	4	-\$754,362	\$1,115,067	\$360,705	\$16,351	\$75,385	\$124,114	\$144,855	986	2,522	1,761	4,503
	5	\$392,976	\$0	\$392,976	\$17,218	\$75,873	\$138,749	\$161,136	0	2,522	0	4,503
	6	\$418,992	\$0	\$418,992	\$18,131	\$79,899	\$148,790	\$172,171	0	2,522	0	4,503
	7	\$434,259	\$0	\$434,259	\$19,092	\$84,139	\$154,621	\$176,408	0	2,522	0	4,503
	8	\$444,188	\$0	\$444,188	\$20,103	\$88,604	\$155,580	\$179,900	0	2,522	0	4,503
	9	\$452,402	\$0	\$452,402	\$21,169	\$93,306	\$155,538	\$182,389	0	2,522	0	4,503
	10	\$464,460	\$0	\$464,460	\$22,291	\$98,257	\$159,103	\$184,808	0	2,522	0	4,503
	11	\$463,074	\$0	\$463,074	\$23,472	\$103,472	\$155,616	\$180,514	0	2,522	0	4,503
	12	\$483,915	\$0	\$483,915	\$24,716	\$108,962	\$163,866	\$186,370	0	2,522	0	4,503
	13	\$502,630	\$0	\$502,630	\$25,887	\$112,796	\$169,832	\$194,115	0	2,508	0	4,426
	14	\$470,151	\$0	\$470,151	\$26,366	\$106,320	\$156,342	\$181,123	0	2,426	0	3,962
	15	\$372,215	\$0	\$372,215	\$25,862	\$85,402	\$120,700	\$140,251	0	2,260	0	3,022
	16	\$181,599	\$0	\$181,599	\$24,413	\$59,691	\$46,051	\$51,444	0	2,026	0	2,006
	17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	1,627	0	1,610
	18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	818	0	810
Commercial Lighting Efficiency Program	1	-\$2,010,555	\$2,646,095	\$635,540	\$138,541	\$135,611	\$141,415	\$219,972	1,833	1,833	8,166	8,166
	2	-\$9,985,835	\$15,812,266	\$5,826,431	\$923,237	\$1,038,048	\$1,285,207	\$1,940,386	11,615	13,447	54,561	62,726
	3	-\$8,185,337	\$27,010,814	\$18,825,477	\$1,506,783	\$2,615,500	\$3,520,780	\$5,340,117	21,314	34,762	94,431	157,157
	4	\$14,589,011	\$14,603,952	\$29,192,963	\$276,863	\$3,401,082	\$4,646,765	\$7,324,143	7,939	42,701	45,991	203,148
	5	\$38,065,313	\$0	\$38,065,313	\$291,536	\$3,423,113	\$5,198,190	\$8,147,530	0	42,701	0	203,148
	6	\$39,669,922	\$0	\$39,669,922	\$306,988	\$3,604,762	\$5,573,439	\$8,712,120	0	42,701	0	203,148
	7	\$40,803,791	\$0	\$40,803,791	\$323,258	\$3,796,051	\$5,792,816	\$8,940,974	0	42,701	0	203,148
	8	\$41,723,962	\$0	\$41,723,962	\$340,391	\$3,997,491	\$5,829,968	\$9,116,695	0	42,701	0	203,148
	9	\$42,574,446	\$0	\$42,574,446	\$358,432	\$4,209,620	\$5,828,302	\$9,239,069	0	42,701	0	203,148
	10	\$43,586,551	\$0	\$43,586,551	\$377,428	\$4,433,007	\$5,968,868	\$9,357,498	0	42,701	0	203,148
	11	\$44,016,876	\$0	\$44,016,876	\$397,432	\$4,668,247	\$5,838,580	\$9,140,765	0	42,701	0	203,148
	12	\$45,405,210	\$0	\$45,405,210	\$418,496	\$4,915,971	\$6,131,476	\$9,433,691	0	42,701	0	203,148
	13	\$47,128,459	\$0	\$47,128,459	\$440,676	\$5,176,841	\$6,467,674	\$9,992,084	0	42,701	0	203,148
	14	\$48,590,435	\$0	\$48,590,435	\$464,032	\$5,451,554	\$6,648,060	\$10,417,849	0	42,701	0	203,148
	15	\$49,715,403	\$0	\$49,715,403	\$488,626	\$5,740,845	\$6,733,718	\$10,573,100	0	42,701	0	203,148
	16	\$42,855,187	\$0	\$42,855,187	\$492,442	\$5,802,487	\$3,904,643	\$5,893,634	0	40,868	0	194,983
	17	\$26,467,958	\$0	\$26,467,958	\$0	\$0	\$0	\$0	0	29,253	0	140,422
	18	\$19,838,003	\$0	\$19,838,003	\$0	\$0	\$0	\$0	0	7,939	0	45,991
	19	\$9,744,422	\$0	\$9,744,422	\$0	\$0	\$0	\$0	0	0	0	0
Custom Commercial Program	1	-\$342,807	\$342,807	\$0	\$0	\$0	\$0	\$0	0	0	0	0
	2	-\$150,071	\$344,848	\$194,777	\$40,776	\$37,497	\$46,407	\$70,097	594	594	2,266	2,266
	3	-\$133,652	\$333,950	\$467,603	\$62,964	\$92,225	\$124,095	\$188,319	859	1,453	3,276	5,542
	4	\$325,206	\$334,293	\$659,499	\$14,489	\$142,725	\$194,980	\$307,305	782	2,235	2,984	8,525
	5	\$718,895	\$0	\$718,895	\$15,257	\$143,650	\$218,136	\$341,853	0	2,235	0	8,525
	6	\$766,792	\$0	\$766,792	\$16,065	\$151,273	\$233,878	\$365,576	0	2,235	0	8,525
	7	\$794,558	\$0	\$794,558	\$16,917	\$159,300	\$243,088	\$375,253	0	2,235	0	8,525
	8	\$812,842	\$0	\$812,842	\$17,814	\$167,753	\$244,653	\$382,622	0	2,235	0	8,525
	9	\$827,734	\$0	\$827,734	\$18,758	\$176,655	\$244,583	\$387,739	0	2,235	0	8,525
	10	\$848,986	\$0	\$848,986	\$19,752	\$186,029	\$250,517	\$392,688	0	2,235	0	8,525
	11	\$845,348	\$0	\$845,348	\$20,799	\$195,901	\$245,052	\$383,596	0	2,235	0	8,525
	12	\$881,328	\$0	\$881,328	\$21,901	\$206,297	\$257,260	\$395,870	0	2,235	0	8,525
	13	\$930,973	\$0	\$930,973	\$23,062	\$217,244	\$271,382	\$419,285	0	2,235	0	8,525
	14	\$969,149	\$0	\$969,149	\$24,284	\$228,772	\$278,932	\$437,160	0	2,235	0	8,525
	15	\$992,697	\$0	\$992,697	\$25,571	\$240,912	\$282,552	\$443,661	0	2,235	0	8,525
	16	\$711,544	\$0	\$711,544	\$26,926	\$253,697	\$171,723	\$259,197	0	2,235	0	8,525
	17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	1,641	0	6,259
	18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	782	0	2,984
Time of Use - Hourly Rate Offerings	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0
	2	-\$126,174	\$167,561	\$41,388	\$8,542	\$4,019	\$28,826	\$0	124	124	243	243
	3	\$196,398	\$172,300	\$368,698	\$48,539	\$36,378	\$283,780	\$0	1,120	1,120	2,186	2,186
	4	\$767,754	\$175,312	\$943,066	\$21,782	\$109,786	\$811,498	\$0	3,359	3,359	6,558	6,558

Table 7D: TRC Benefits Table

o Submit yearly projections for each program thru final year of that program for TRC evaluation.

Commercial/Industrial Large		TRC Benefits By Program Per Year (\$000)												
		Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity		Energy		Load Reductions		MWh Saved		
						Annual	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime	
Commercial & Industrial Custom Applications Program		1	-\$340,523	\$340,523	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0
		2	\$995,499	\$294,153	\$1,289,653	\$242,221	\$157,147	\$354,090	\$536,195	3,638	3,638	18,522	18,522	
		3	\$3,148,014	\$199,917	\$3,347,931	\$397,615	\$412,992	\$1,005,875	\$1,531,448	5,822	9,460	29,635	48,157	
		4	\$3,719,956	\$196,067	\$3,916,023	\$74,144	\$521,780	\$1,288,370	\$2,031,728	2,333	11,793	11,958	60,115	
		5	\$4,290,064	\$0	\$4,290,064	\$78,074	\$528,288	\$1,434,850	\$2,248,852	0	11,793	0	60,115	
		6	\$4,577,704	\$0	\$4,577,704	\$82,212	\$556,351	\$1,536,967	\$2,402,173	0	11,793	0	60,115	
		7	\$4,739,984	\$0	\$4,739,984	\$86,569	\$585,906	\$1,598,936	\$2,468,573	0	11,793	0	60,115	
		8	\$4,833,353	\$0	\$4,833,353	\$91,157	\$617,031	\$1,608,618	\$2,516,548	0	11,793	0	60,115	
		9	\$4,902,629	\$0	\$4,902,629	\$95,989	\$649,808	\$1,607,371	\$2,549,461	0	11,793	0	60,115	
		10	\$5,010,784	\$0	\$5,010,784	\$101,076	\$684,328	\$1,645,404	\$2,579,976	0	11,793	0	60,115	
		11	\$4,958,212	\$0	\$4,958,212	\$106,433	\$720,681	\$1,610,255	\$2,520,843	0	11,793	0	60,115	
		12	\$5,159,918	\$0	\$5,159,918	\$112,074	\$758,965	\$1,689,246	\$2,599,633	0	11,793	0	60,115	
		13	\$5,447,901	\$0	\$5,447,901	\$118,014	\$799,283	\$1,780,332	\$2,750,272	0	11,793	0	60,115	
		14	\$5,661,040	\$0	\$5,661,040	\$124,269	\$841,742	\$1,828,432	\$2,866,596	0	11,793	0	60,115	
		15	\$5,773,820	\$0	\$5,773,820	\$130,855	\$886,458	\$1,850,168	\$2,906,339	0	11,793	0	60,115	
		16	\$3,905,588	\$0	\$3,905,588	\$137,790	\$933,548	\$1,129,410	\$1,704,840	0	11,793	0	60,115	
		17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	8,155	0	41,593	
		18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	2,333	0	11,958	
Customer Load Response Program		1	-\$257,667	\$257,667	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
		2	\$725,356	\$367,025	\$1,092,382	\$998,574	\$6,363	\$87,444	\$0	15,000	15,000	750	750	
		3	\$836,032	\$580,339	\$1,416,371	\$1,218,892	\$12,435	\$185,044	\$0	29,000	29,000	1,450	1,450	
		4	-\$738,201	\$1,301,799	\$563,598	\$182,324	\$25,171	\$356,103	\$0	29,000	29,000	2,900	2,900	
Customer Resources for Demand Response		1	-\$257,667	\$257,667	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
		2	\$1,538,140	\$282,496	\$1,820,636	\$1,664,291	\$10,605	\$145,740	\$0	25,000	25,000	1,250	1,250	
		3	\$1,372,515	\$581,101	\$1,953,615	\$1,681,231	\$17,152	\$255,233	\$0	40,000	40,000	2,000	2,000	
		4	-\$914,053	\$1,691,430	\$777,377	\$251,482	\$34,719	\$491,176	\$0	40,000	40,000	4,000	4,000	
Distributed Generation Program		1	-\$51,533	\$51,533	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
		2	\$120,272	\$169,281	\$289,553	\$266,287	\$1,697	\$21,569	\$0	4,000	4,000	200	200	
		3	\$81,872	\$256,661	\$338,533	\$294,215	\$3,002	\$41,316	\$0	7,000	7,000	350	350	
		4	-\$302,893	\$432,487	\$129,594	\$44,009	\$6,076	\$79,509	\$0	7,000	7,000	700	700	
Variable Frequency Drives Program		1	-\$468,775	\$495,518	\$26,744	\$5,783	\$3,404	\$12,717	\$4,841	79	79	399	399	
		2	-\$965,025	\$1,168,935	\$203,909	\$36,763	\$23,687	\$104,721	\$38,739	473	552	2,393	2,792	
		3	-\$1,547,597	\$2,101,581	\$553,984	\$63,000	\$64,987	\$310,459	\$115,538	947	1,499	4,786	7,578	
		4	-\$1,352,592	\$2,199,359	\$846,767	\$15,375	\$107,314	\$525,661	\$198,417	947	2,446	4,786	12,364	
		5	\$771,572	\$159,116	\$930,688	\$16,190	\$108,652	\$586,367	\$219,479	0	2,446	0	12,364	
		6	\$831,460	\$162,658	\$994,118	\$17,048	\$114,424	\$627,601	\$235,045	0	2,446	0	12,364	
		7	\$868,485	\$166,280	\$1,034,765	\$17,952	\$120,503	\$653,355	\$242,955	0	2,446	0	12,364	
		8	\$881,156	\$169,982	\$1,051,138	\$18,903	\$126,904	\$657,786	\$247,544	0	2,446	0	12,364	
		9	\$887,527	\$173,767	\$1,061,294	\$19,905	\$133,645	\$657,297	\$250,446	0	2,446	0	12,364	
		10	\$912,684	\$177,635	\$1,090,319	\$20,960	\$140,745	\$675,595	\$253,019	0	2,446	0	12,364	
		11	\$897,292	\$181,590	\$1,078,882	\$22,071	\$148,222	\$661,317	\$247,272	0	2,446	0	12,364	
		12	\$935,400	\$185,633	\$1,121,033	\$23,241	\$156,095	\$687,055	\$254,641	0	2,446	0	12,364	
		13	\$993,479	\$189,767	\$1,183,246	\$24,473	\$164,388	\$725,340	\$269,046	0	2,446	0	12,364	
		14	\$1,029,028	\$193,992	\$1,223,020	\$25,770	\$173,120	\$743,503	\$280,627	0	2,446	0	12,364	
		15	\$1,049,638	\$198,311	\$1,247,949	\$27,136	\$182,317	\$754,279	\$284,217	0	2,446	0	12,364	
		16	\$727,752	\$196,187	\$923,939	\$27,652	\$185,808	\$521,654	\$188,825	0	2,367	0	11,965	
		17	-\$160,444	\$160,444	\$0	\$0	\$0	\$0	\$0	0	1,893	0	9,572	
		18	-\$82,008	\$82,008	\$0	\$0	\$0	\$0	\$0	0	947	0	4,786	

Table 7E: TRC Benefits Table

Governmental/Non-Profit		TRC Benefits By Program Per Year (\$000)											
		Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity		Energy		Load Reductions in kW		MWh Saved	
						Annual	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime
Governmental/Non-Profit Lighting Program		1	-\$328,455	\$520,700	\$192,245	\$19,292	\$47,197	\$49,196	\$76,560	255	255	2,842	2,842
		2	-\$336,589	\$3,263,031	\$2,926,442	\$208,893	\$643,794	\$796,781	\$1,203,518	2,787	3,043	36,061	38,903
		3	\$3,631,499	\$3,040,222	\$6,671,721	\$251,267	\$957,256	\$1,288,050	\$1,954,664	2,754	5,797	18,616	57,519
		4	\$5,547,345	\$2,538,441	\$8,085,785	\$51,623	\$1,071,437	\$1,463,712	\$2,306,937	2,195	7,962	8,416	63,997
		5	\$7,103,542	\$0	\$7,103,542	\$51,869	\$682,081	\$1,035,757	\$1,623,197	0	7,597	0	40,479
		6	\$6,712,960	\$0	\$6,712,960	\$53,734	\$577,498	\$892,851	\$1,395,623	0	7,474	0	32,545
		7	\$6,903,015	\$0	\$6,903,015	\$56,581	\$608,143	\$928,013	\$1,432,567	0	7,474	0	32,545
		8	\$7,058,726	\$0	\$7,058,726	\$59,580	\$640,415	\$933,989	\$1,460,697	0	7,474	0	32,545
		9	\$7,203,391	\$0	\$7,203,391	\$62,738	\$674,399	\$933,720	\$1,480,231	0	7,474	0	32,545
		10	\$7,374,276	\$0	\$7,374,276	\$66,063	\$710,186	\$956,376	\$1,499,124	0	7,474	0	32,545
		11	\$7,452,123	\$0	\$7,452,123	\$69,565	\$747,873	\$935,510	\$1,464,417	0	7,474	0	32,545
		12	\$7,683,246	\$0	\$7,683,246	\$73,251	\$787,559	\$982,116	\$1,511,275	0	7,474	0	32,545
		13	\$7,968,606	\$0	\$7,968,606	\$77,134	\$829,352	\$1,036,029	\$1,600,663	0	7,474	0	32,545
		14	\$8,212,297	\$0	\$8,212,297	\$81,222	\$873,362	\$1,064,852	\$1,668,903	0	7,474	0	32,545
		15	\$8,402,308	\$0	\$8,402,308	\$85,527	\$919,707	\$1,078,671	\$1,693,719	0	7,474	0	32,545
		16	\$7,355,892	\$0	\$7,355,892	\$87,346	\$941,572	\$637,335	\$961,988	0	7,249	0	31,640
		17	\$4,730,704	\$0	\$4,730,704	\$0	\$0	\$0	\$0	0	4,826	0	19,098
		18	\$1,850,945	\$0	\$1,850,945	\$0	\$0	\$0	\$0	0	2,195	0	8,416
		19	\$609,077	\$0	\$609,077	\$0	\$0	\$0	\$0	0	0	0	0



**E. Calculation methods and assumptions. Describe methods used for estimating all program costs, including administrative, marketing, and incentives costs; include key assumptions. Describe assumptions and present all calculations, data and results in a consistent format. Reference Appendix D.**

Allegheny estimated program costs as follows:

- The Company issued RFP's, quotes and/or RFI's for various services and based its estimates off of the RFP, quote and/or RFI results. RFP, quote and/or RFI results were utilized to estimate costs for rebate administration, appliance recycling, energy efficiency kits, home energy audits, commercial and industrial energy audits, measurement and verification of program results and the demand response study. Key assumptions include program business requirements and participation levels, as well as the results of the RFP, quote and/or RFI received for the various functions and services.
- The Company calculated costs based on detailed business or IT requirements, or specific estimates associated with the function or service, for calculating the cost for program administration and management, database and web portal development, engineering services, marketing and training. Estimates based on similar projects or rates were utilized where applicable. Key assumptions includes the specific business or IT requirements of the Plan or Program upon which costs were calculated, the estimate for a specific function or service required of a program, and the marketing plan. Participation levels, to the extent that this impacts the cost, were included in the business or IT requirements or specific estimates in arriving at the final cost.
- The Company calculated costs based on expenditures associated with the specific function or service incurred YTD, and an estimate of the time commitment required to perform or complete the function or service going forward. Program design and development expenditures were calculated in this fashion. Key assumptions include the required remaining or on-going time commitment for the function or service.

The Company allocated program costs to customer sectors, programs and/or measures (where applicable) on a shared or participation level basis, and to specific programs and/or measures when such cost was specific to the program or measure. Energy usage by customer sector was also utilized to allocate certain costs to customer sectors.

See Section 3.2 to 3.5 for program cost information. See Tables 6A and 6B as presented in Section 10.D. for the program specific and common costs for each program and respective customer sector. The following table summarizes the cost detail elements in which the Company calculated program costs:

<b>Program Cost Elements</b>	
<b>Element</b>	<b>Description</b>
Utility Administrative Costs	Includes internal utility costs associated with program design, development, management, training, support, and quality assurance. Costs captured in this activity include: employee labor, benefits, expenses, materials, and supplies. Also includes start-up costs including: database development, web portal and IT requirements.
Marketing Costs	Includes costs associated with marketing, advertising, trade shows and events, brochures, bill inserts and collateral materials, toll free numbers, and web site. Costs captured in this activity include: labor, benefits, expenses, consultants, contractors, materials, and supplies.
Outside Services	Includes the cost of contractors and consultants used in support of program design, development, support, and quality assurance. Captures all of the utility's external costs associated with program administration. Examples include recycling vendors, program administrators, development of educational materials, rebate administration, engineering services and other third party services.
Evaluation Costs	Includes costs associated with measurement and evaluation. Costs captured in this activity include: labor, benefits, expenses, consultants, contractors, tracking systems, materials, and supplies.
Incentives	All rebate dollars paid directly to customers as well as "indirect" payments to customers such as discounted prices and give aways. Also includes utility costs not paid by the customer that are attributable to providing energy efficiency services to customers (e.g. technical audits, employee and contract labor for installing efficiency measures, expenses, materials, and supplies).

## F. Other

### F.1. List of Acronyms and Abbreviations

ACEEE	American Council for an Energy-Efficient Economy
AIDA	Attention, Interest, Desire, Action
ASD	adjustable speed drive
BAS	Business Account Specialists
BPI	Building Performance Institute
CAC	central air conditioning
CEE	Consortium of Energy Efficiency
CFL	compact fluorescent lighting
CIS	customer information system
Commission	Pennsylvania Public Utility Commission
CPR	critical peak rebate
DCED	Department of Community and Economic Development
DOE	Department of Energy
DR	demand response
EE&C	energy efficiency and conservation
EDC	electric distribution company
EISA	Energy Independence and Security Act
EM&V	evaluation, measurement and verification
EPA	Environmental Protection Agency
ESCO	Energy Service Company
FTE	full time equivalents
HID	high intensity discharge
HP	heat pump
HPO	hourly pricing option
HSPF	heating season performance factor
HVAC	Heating, ventilating and air conditioning
ILR	interruptible load response
JUUMP	Joint Utility Usage Management Program
kW	kilowatts
KWh	kilowatt-hours
LDDAP	Local Development District Associations of Pennsylvania
LED	light emitting diode
LIURP	Low-Income Usage Reduction Program

MW	megawatts
MWh	megawatt-hours
NEEP	Northeast Efficiency Partnership
PCT	programmable controlled thermostat
PJM	PJM Interconnection, L.L.C.
PUC	Pennsylvania Public Utility Commission
RFP	request for purchase
RPM	Reliability Pricing Model
SEER	Seasonal Energy Efficiency Ratio
SMIP	Smart Meter Procurement and Installation Plan
TOU	time of use rate
TCP	Technical Consumer Products
TRC	total resource cost
TRM	Technical Reference Manual

**F.2. Sample of Federal and State Incentives**

<b>Residential</b>		
<b>Source</b>	<b>Eligible Components/Technologies</b>	<b>Link</b>
Federal Tax Credits for Energy Efficiency	<ul style="list-style-type: none"> <li>• Windows and Doors</li> <li>• Insulation</li> <li>• Roofs (Metal and Asphalt)</li> <li>• HVAC</li> <li>• Water Heaters (non-solar)</li> <li>• Biomass Stoves</li> <li>• Geothermal Heat Pumps</li> <li>• Solar Panels</li> <li>• Solar Water Heaters</li> <li>• Small Wind Energy Systems</li> <li>• Fuel Cells</li> </ul>	Energy Star <a href="http://www.energystar.gov/index.cfm?c=products.pr_tax_credits">http://www.energystar.gov/index.cfm?c=products.pr_tax_credits</a>  Tax Incentives Assistance Project <a href="http://energytaxincentives.org/uploaded_files/residentialflyer.pdf">http://energytaxincentives.org/uploaded_files/residentialflyer.pdf</a>
Keystone HELP Energy Efficiency Loan & Rebate Program	<ul style="list-style-type: none"> <li>• Equipment Insulation</li> <li>• Furnaces</li> <li>• Boilers</li> <li>• Heat pumps</li> <li>• Air conditioners</li> <li>• Programmable Thermostats</li> <li>• Caulking/Weather-stripping</li> <li>• Duct/Air sealing</li> <li>• Building Insulation</li> <li>• Windows</li> <li>• Doors</li> <li>• Water Heaters</li> <li>• Ceiling Fans</li> <li>• Ventilating Fans</li> <li>• Biomass</li> <li>• Geothermal Heat Pumps</li> <li>• "Alternative Energy Heating and Cooling Equipment Systems" (Excluding Solar)</li> </ul>	<a href="http://www.keystonehelp.com">http://www.keystonehelp.com</a>
Special Session H.B.1	<ul style="list-style-type: none"> <li>• Solar Water Heat</li> <li>• Solar Thermal Process Heat</li> <li>• Photovoltaic</li> <li>• Wind</li> <li>• Geothermal Electric</li> <li>• Geothermal Heat Pumps</li> <li>• Solar Space Heat</li> <li>• Biomass</li> <li>• Bio-gas</li> <li>• Daylighting</li> <li>• Small Hydroelectric</li> <li>• Solar Thermal Electric</li> <li>• Fuel Cells</li> <li>• Municipal Solid Waste</li> </ul>	

<b>Commercial, Industrial, Nonprofit, Schools, Local Government, Tribal Government</b>		
<b>Source</b>	<b>Eligible Components/Technologies</b>	<b>Link</b>
Federal Tax Deductions for Commercial Buildings:	<ul style="list-style-type: none"> <li>• the building envelope, lighting, or heating and cooling systems.</li> </ul>	<a href="http://www.energystar.gov/index.cfm?c=products.pr_tax_credits#s8">http://www.energystar.gov/index.cfm?c=products.pr_tax_credits#s8</a>
Special Session H.B.1	<ul style="list-style-type: none"> <li>• Solar Water Heat</li> <li>• Solar Thermal Process Heat</li> <li>• Photovoltaic</li> <li>• Wind</li> <li>• Geothermal Electric</li> <li>• Geothermal Heat Pumps</li> <li>• Solar Space Heat</li> <li>• Biomass</li> <li>• Bio-gas</li> <li>• Daylighting</li> <li>• Small Hydroelectric</li> <li>• Solar Thermal Electric</li> <li>• Fuel Cells</li> <li>• Municipal Solid Waste</li> </ul>	

**F.3. Table 2 (Program Level) Energy & Demand Reductions by Program**

**Table 2 (Program Level): Summary of Portfolio Energy and Demand Savings**  
 o Program Year is June 1 – May 31

MWh Saved for Consumption Reductions kW Saved for Peak Load Reductions			Program Year 2009		Program Year 2010		Program Year 2011		Program Year 2012		
			MWh Saved	kW Saved	MWh Saved	kW Saved	MWh Saved	kW Saved	MWh Saved	kW Saved	
Baseline <sup>5</sup>			20,938,650	3,496,000	20,938,650	3,496,000	20,938,650	3,496,000	20,938,650	3,496,000	
<b>Residential Sector (exclusive of Low-Income) - Cumulative Projected Portfolio Savings</b>	CFL Rewards Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0	
		Existing Metering	7,002	19	31,963	87	80,116	218	124,859	339	
		<b>CFL Rewards Program Total</b>	<b>7,002</b>	<b>19</b>	<b>31,963</b>	<b>87</b>	<b>80,116</b>	<b>218</b>	<b>124,859</b>	<b>339</b>	
	Critical Peak Rebate Rate Offering	Smart Meter Infrastructure Enabled	0	0	36	182	558	2,788	1,903	9,513	
		Existing Metering	0	0	0	0	0	0	0	0	
		<b>Critical Peak Rebate Rate Offering Total</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>182</b>	<b>558</b>	<b>2,788</b>	<b>1,903</b>	<b>9,513</b>	
	Energy Star Appliance Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0	
		Existing Metering	3,062	1,029	14,239	4,854	36,553	12,351	59,001	19,894	
		<b>Energy Star Appliance Program Total</b>	<b>3,062</b>	<b>1,029</b>	<b>14,239</b>	<b>4,854</b>	<b>36,553</b>	<b>12,351</b>	<b>59,001</b>	<b>19,894</b>	
	Home Performance Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0	
		Existing Metering	1,872	220	25,243	2,693	43,883	4,766	59,685	6,418	
		<b>Home Performance Program Total</b>	<b>1,872</b>	<b>220</b>	<b>25,243</b>	<b>2,693</b>	<b>43,883</b>	<b>4,766</b>	<b>59,685</b>	<b>6,418</b>	
	Programmable Controllable Thermostat Demand Response Program	Smart Meter Infrastructure Enabled	0	0	36	182	558	2,788	1,903	9,513	
		Existing Metering	0	0	0	0	0	0	0	0	
		<b>Programmable Controllable Thermostat Demand Response Program Total</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>182</b>	<b>558</b>	<b>2,788</b>	<b>1,903</b>	<b>9,513</b>	
	Residential HVAC Efficiency Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0	
		Existing Metering	163	176	1,145	1,236	3,120	3,369	5,107	5,515	
		<b>Residential HVAC Efficiency Program Total</b>	<b>163</b>	<b>176</b>	<b>1,145</b>	<b>1,236</b>	<b>3,120</b>	<b>3,369</b>	<b>5,107</b>	<b>5,515</b>	
	Residential Rewards - Pay Ahead Services Rate Offerings	Smart Meter Infrastructure Enabled	0	0	230	26	3,517	402	12,001	1,370	
		Existing Metering	0	0	0	0	0	0	0	0	
		<b>Residential Rewards - Pay Ahead Services Rate Offerings Total</b>	<b>0</b>	<b>0</b>	<b>230</b>	<b>26</b>	<b>3,517</b>	<b>402</b>	<b>12,001</b>	<b>1,370</b>	
			Smart Meter Infrastructure Enabled Total	0	0	303	391	4,633	5,978	15,806	20,397
			Existing Metering Total	12,100	1,444	72,588	8,869	163,672	20,704	248,653	32,166
			<b>Residential Sector (exclusive of Low-Income) - Cumulative Projected Portfolio Savings Total</b>	<b>12,100</b>	<b>1,444</b>	<b>72,891</b>	<b>9,260</b>	<b>168,304</b>	<b>26,682</b>	<b>264,458</b>	<b>52,563</b>

Residential Low-Income Sector - Cumulative Projected Portfolio Savings	Low Income Home Performance Check-Up & Appliance Replacement Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0
		Existing Metering	368	72	3,609	709	4,905	964	6,071	1,193
	<b>Low Income Home Performance Check-Up &amp; Appliance Replacement Program Total</b>		<b>368</b>	<b>72</b>	<b>3,609</b>	<b>709</b>	<b>4,905</b>	<b>964</b>	<b>6,071</b>	<b>1,193</b>
	Low Income Joint Utility Usage Management Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0
		Existing Metering	589	63	4,144	443	7,721	825	11,319	1,210
	<b>Low Income Joint Utility Usage Management Program Total</b>		<b>589</b>	<b>63</b>	<b>4,144</b>	<b>443</b>	<b>7,721</b>	<b>825</b>	<b>11,319</b>	<b>1,210</b>
	Low Income Room Air Conditioner Replacement Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0
		Existing Metering	21	19	150	131	276	242	401	351
	<b>Low Income Room Air Conditioner Replacement Program Total</b>		<b>21</b>	<b>19</b>	<b>150</b>	<b>131</b>	<b>276</b>	<b>242</b>	<b>401</b>	<b>351</b>
		<b>Smart Meter Infrastructure Enabled Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>Existing Metering Total</b>	<b>979</b>	<b>154</b>	<b>7,903</b>	<b>1,283</b>	<b>12,902</b>	<b>2,031</b>	<b>17,791</b>	<b>2,753</b>	
	<b>Residential Low-Income Sector - Cumulative Projected Portfolio Savings Total</b>	<b>979</b>	<b>154</b>	<b>7,903</b>	<b>1,283</b>	<b>12,902</b>	<b>2,031</b>	<b>17,791</b>	<b>2,753</b>	
Commercial/Industrial Small Sector - Cumulative Projected Portfolio Savings	Commercial HVAC Efficiency Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0
		Existing Metering	142	79	1,001	561	2,742	1,536	4,503	2,522
	<b>Commercial HVAC Efficiency Program Total</b>		<b>142</b>	<b>79</b>	<b>1,001</b>	<b>561</b>	<b>2,742</b>	<b>1,536</b>	<b>4,503</b>	<b>2,522</b>
	Commercial Lighting Efficiency Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0
		Existing Metering	8,166	1,833	62,726	13,447	157,157	34,762	203,148	42,701
	<b>Commercial Lighting Efficiency Program Total</b>		<b>8,166</b>	<b>1,833</b>	<b>62,726</b>	<b>13,447</b>	<b>157,157</b>	<b>34,762</b>	<b>203,148</b>	<b>42,701</b>
	Custom Commercial Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0
		Existing Metering	0	0	2,266	594	5,542	1,453	8,525	2,235
	<b>Custom Technology Applications Program Total</b>		<b>0</b>	<b>0</b>	<b>2,266</b>	<b>594</b>	<b>5,542</b>	<b>1,453</b>	<b>8,525</b>	<b>2,235</b>
	Time of Use - Hourly Rate Offerings	Smart Meter Infrastructure Enabled	0	0	206	106	1,858	952	5,574	2,856
	Existing Metering	0	0	36	19	328	168	984	504	
<b>Time of Use - Hourly Rate Offerings Total</b>		<b>0</b>	<b>0</b>	<b>243</b>	<b>124</b>	<b>2,186</b>	<b>1,120</b>	<b>6,558</b>	<b>3,359</b>	
	<b>Smart Meter Infrastructure Enabled Total</b>	<b>0</b>	<b>0</b>	<b>206</b>	<b>106</b>	<b>1,858</b>	<b>952</b>	<b>5,574</b>	<b>2,856</b>	
	<b>Existing Metering Total</b>	<b>8,307</b>	<b>1,912</b>	<b>66,030</b>	<b>14,621</b>	<b>165,768</b>	<b>37,918</b>	<b>217,160</b>	<b>47,961</b>	
	<b>Commercial/Industrial Small Sector - Cumulative Projected Portfolio Savings Total</b>	<b>8,307</b>	<b>1,912</b>	<b>66,236</b>	<b>14,727</b>	<b>167,626</b>	<b>38,869</b>	<b>222,734</b>	<b>50,817</b>	



Commercial/Industrial Large Sector - Cumulative Projected Portfolio Savings	Commercial & Industrial Custom Applications Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0	
		Existing Metering	0	0	18,522	3,638	48,157	9,460	60,115	11,793	
	<b>Commercial &amp; Industrial Custom Applications Program Total</b>		<b>0</b>	<b>0</b>	<b>18,522</b>	<b>3,638</b>	<b>48,157</b>	<b>9,460</b>	<b>60,115</b>	<b>11,793</b>	
	Customer Load Response Program	Smart Meter Infrastructure Enabled	0	0	300	6,000	580	11,600	1,160	11,600	
		Existing Metering	0	0	450	9,000	870	17,400	1,740	17,400	
	<b>Customer Load Response Program Total</b>		<b>0</b>	<b>0</b>	<b>750</b>	<b>15,000</b>	<b>1,450</b>	<b>29,000</b>	<b>2,900</b>	<b>29,000</b>	
	Customer Resources for Demand Response	Smart Meter Infrastructure Enabled	0	0	500	10,000	800	16,000	1,600	16,000	
		Existing Metering	0	0	750	15,000	1,200	24,000	2,400	24,000	
	<b>Customer Resources for Demand Response Total</b>		<b>0</b>	<b>0</b>	<b>1,250</b>	<b>25,000</b>	<b>2,000</b>	<b>40,000</b>	<b>4,000</b>	<b>40,000</b>	
	Distributed Generation Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0	
		Existing Metering	0	0	200	4,000	350	7,000	700	7,000	
	<b>Distributed Generation Program Total</b>		<b>0</b>	<b>0</b>	<b>200</b>	<b>4,000</b>	<b>350</b>	<b>7,000</b>	<b>700</b>	<b>7,000</b>	
	Variable Frequency Drives Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0	
		Existing Metering	399	79	2,792	552	7,578	1,499	12,364	2,446	
<b>Variable Frequency Drives Program Total</b>		<b>399</b>	<b>79</b>	<b>2,792</b>	<b>552</b>	<b>7,578</b>	<b>1,499</b>	<b>12,364</b>	<b>2,446</b>		
		<b>Smart Meter Infrastructure Enabled Total</b>		<b>0</b>	<b>0</b>	<b>800</b>	<b>16,000</b>	<b>1,380</b>	<b>27,600</b>	<b>2,760</b>	<b>27,600</b>
		<b>Existing Metering Total</b>		<b>399</b>	<b>79</b>	<b>22,714</b>	<b>32,191</b>	<b>58,155</b>	<b>59,359</b>	<b>77,318</b>	<b>62,639</b>
		<b>Commercial/Industrial Large Sector - Cumulative Projected Portfolio Savings Total</b>									
		<b>399</b>	<b>79</b>	<b>23,514</b>	<b>48,191</b>	<b>59,535</b>	<b>86,959</b>	<b>80,078</b>	<b>90,239</b>		
Governmental/Non-Profit Sector - Cumulative Projected Portfolio Savings	Governmental/Non-Profit Lighting Program	Smart Meter Infrastructure Enabled	0	0	0	0	0	0	0	0	
		Existing Metering	2,842	255	38,903	3,043	57,519	5,797	63,997	7,962	
	<b>Governmental/Non-Profit Lighting Program Total</b>		<b>2,842</b>	<b>255</b>	<b>38,903</b>	<b>3,043</b>	<b>57,519</b>	<b>5,797</b>	<b>63,997</b>	<b>7,962</b>	
			<b>Smart Meter Infrastructure Enabled Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
			<b>Existing Metering Total</b>		<b>2,842</b>	<b>255</b>	<b>38,903</b>	<b>3,043</b>	<b>57,519</b>	<b>5,797</b>	<b>63,997</b>
		<b>Governmental/Non-Profit Sector - Cumulative Projected Portfolio Savings Total</b>									
		<b>2,842</b>	<b>255</b>	<b>38,903</b>	<b>3,043</b>	<b>57,519</b>	<b>5,797</b>	<b>63,997</b>	<b>7,962</b>		
<b>EE&amp;C Plan Total - Cumulative Projected Savings</b>		<b>Smart Meter Infrastructure Enabled Total</b>		-	-	1,309	16,497	7,871	34,530	24,140	50,852
		<b>Existing Metering Total</b>		24,626	3,844	208,137	60,007	458,015	125,808	624,919	153,481
		<b>TOTAL</b>		<b>24,626</b>	<b>3,844</b>	<b>209,446</b>	<b>76,503</b>	<b>465,886</b>	<b>160,338</b>	<b>649,059</b>	<b>204,334</b>
Percent Reduction From Baseline		0.1%	0.1%	1.0%	2.2%	2.2%	4.6%	3.1%	5.8%		
Commission Identified Goal						<b>209,387</b>			<b>628,160</b>	<b>157,320</b>	
Percent Savings Due to Portfolio Above or Below Commission Goal						<b>100.0%</b>			<b>103.3%</b>	<b>101.9%</b>	

**F.4. Demand Response Meetings and Participating Stakeholders**

<b>Interested Stakeholders and Participants</b>				
<b>Demand Response Working Group</b>				
<b>Name</b>	<b>Company</b>	<b>11/12/2009</b>	<b>11/18/2009</b>	<b>3/12/2010</b>
		9AM to 3PM	9AM to 3PM	9AM to 3PM
Aaron Breidenbaugh	EnerNOC, Inc.	x	x	x
Andrew Dorn	Demand Response Partners	x		
Bob Korandovich	Insight			
Brett Feldman	Constellation			
C.J. Zwick	MWN on Behalf of WPPII	x	x	
Carolyn Pengidore	Clear Choice Energy	x		x
Chris Getty	AE Resources	x	x	
Christopher Ashley	EnerNOC, Inc.	x		
Curtis Shaw	JRH	x		
David Fein	Constellation			
Divesh Gupta	Constellation			
Edward V Johnstonbaugh	Penn State Coop Extension	x		x
Eric Tate	JRH	x		
Gene Ameduri	Enerlogics		x	
George Karayannis	Lockhead Martin	x		x
Jack Williams	Augusta Systems	x		
Jamie Colecchi	Southwestern PA Commission	x	x	
Jennifer Black	Direct Energy	x		
Joe Bugica	Energy Connect, Inc			x
John Choma	Enerlogics	x	x	x
Joseph Ferguson	Ferguson HVAC	x	x	x
Kevin Abbey	PennTAP - Penn State	x		
Mark Alterio	Cooper Industries		x	x
Mike Borden	Converge, Inc.	x	x	
Noel King	EnerNOC, Inc.	x		
Pat Esposito	Augusta Systems			
Paul Tyno	Energy Curtailment Specialist	x	x	
Robert McGrath	Honeywell	x		x
Robert Jepson	Lockhead Martin	x		
Roger Price	PennTAP - Penn State			
Steve Moritz	All Facilities Energy Group	x		
Tom Rutigliano	Cpower	x	x	x
Tony Reynolds	Good Cents	x	x	
Dan Austin	Comverge			
Gene Imel	Powersecure			
Dave Carswell	Ziphany			x
Chuck Lanager	Keytex Energy			
Jim Mancini	Comverge			x
Michael Chase	ECS			x
Scott Ameduri	Enerlogics			x

F.5. Demand Response Program Summary Matrix

Demand Response Program Summary Matrix			
PROGRAM DETAILS	Customer Load Response Program (CLR)	Customer Resources Demand Response Program (CRDR)	Distributed Generation (DG)
Program Description	Provide load management services to customers by providing education and assistance with transition to market prices, PJM energy markets, and contracting with customers for callable load reductions. The customer load will also be registered in PJM markets and will participate in the ILR/ELR programs.	<ol style="list-style-type: none"> <li>Contract with 3rd party PJM CSP(s) who will provide all services to register, recruit, dispatch customer load resources up to 100 hours to contribute to Allegheny's 100 hour Act 129 load reduction goal. The customer load must also be registered in PJM Markets and participate in the ILR/ELR programs.</li> <li>In January of each Program year, Allegheny will conduct a yearly nomination process for CSP(s) to nominate load to the program. All nominations will be evaluated based on the CSP(s) nominated load in MWhrs, and price per MWhr.</li> <li>CSP(s) will have to deliver the nominated load to meet the 100 hour criteria and the CSP(s) responsibility will be to aggregate their load so as to meet the MWhr commitment. FOR EXAMPLE If a CSP can deliver 10MW for 100 hours, or 20 MW for 50 hours, the end result is the same.</li> </ol>	Contract with a 3rd party Distributed Generation Manager to dispatch customer generators up to 100 hours to contribute to Allegheny's 100 hour Act 129 load reduction goal. The Distributed Generation Manager will contract directly with the customer to provide operation and maintenance services and the customer will pay the Distributed Generation Manager directly for these services. The customer load must also be registered in PJM Markets and participate in the ILR/ELR programs. The customer can choose any PJM CSP for this service.
Eligible Customers	Small and large commercial/industrial, government and non-profit customers with demand greater than 300 kW, and less than 300 kW in conjunction with deployment of smart meters.	Small and large commercial/industrial, government and non-profit customers with demand greater than 300 kW, and less than 300 kW in conjunction with deployment of smart meters. CSP(s) may enroll customers with a demand less than 300 kW where a measurement and verification protocol is approved by Allegheny Power in advance of program enrollment.	Small and large commercial/industrial, government and non-profit customers with demand greater than 300 kW, and less than 300 kW in conjunction with deployment of smart meters.
Demand Savings	29 MW For Act 129 - Delivery is 2900 MWhrs	40 MW For Act 129 - Delivery is 4000 MWhrs	7 MW for Act 129 - 700 MWhrs
FTE's Required	3.0 FTE's - Consisting of: 0.75 FTE - Program Manager 0.75 FTE - Technician 1.5 FTE - Account Manager/Business Account Specialist  * All cost associated with Allegheny providing CSP services for the PJM ILR/ELR programs will be accounted for outside the Act 129 Demand Response programs.	1.5 FTE - Consisting of: 0.50 FTE - Program Manager 0.25 FTE - Technician 0.75 FTE - Account Manager/Business Account Specialist	0.50 FTE - Consisting of: 0.25 FTE - Program Manager 0.25 FTE - Account Manager/Business Account Specialist
Customer Incentives	The customer incentive rate will be on a \$\$ per MWhr basis and will be based on the weighted average of contracted nominations with PJM CSP(s) under the CRDR program, reduced by an Allegheny Power administration adjustment to account for the differences in administration costs between the CLR program and the CRDR programs.	<ol style="list-style-type: none"> <li>Customers will receive incentives for participating in this program directly from the PJM CSP(s) based on the contract between the CSP and the customer. Allegheny will pay the PJM CSP(s) for load curtailment based on the actual measured load reduction from the customer baseline for each hour of the load curtailment event.</li> <li>CSP(s) will be subject to an under performance penalty for hourly shortfalls relative to their contracted load reduction and will be based on a MWhr pricing equivalent of 150%. For example: If a CSP nominates 1000 MWhrs at \$400/MWhr into the program and only delivers 950, the penalty will be 50 Mwhrs x \$400/MWhr x 1.5.</li> <li>CSP's will also be reward for overperformance relative to the contracted load reduction. The maximum contract overperformance will be capped at 5% of the total contract.</li> </ol>	The customer incentive rate will be on a \$\$ per MWhr basis and will be based on the weighted average of contracted nominations with PJM CSP(s) under the CRDR program. The customer pays all operating and maintenance costs according to their contract with the Distributed Generation Manager.
Data Services	Prior to implementation of Smart Metering Infrastructure, Allegheny will provide access to our interval metering data via our Energy Data Services to any customer or CSP whose load is participating in an Allegheny Act 129 Demand Response Program. Interval data can be provided on the EDS Monthly or EDS Daily format in an Excel Spreadsheet. For EDS daily data, the data file is available the next day.		
Marketing Strategy	<ol style="list-style-type: none"> <li>Assigned accounts: Account Managers handle approximately 100 of the top energy users that would be eligible for these programs and will contact the assigned customers to educate them about the Customer Load Response Program, Customer Load Resources Program and Distributed Generation programs. Account Managers will participate and assist in joint meetings at the request of PJM CSPs or customers. Allegheny has also identified approximately 80 customers with standby generation that could participate in the Distributed Generation program and will directly market to these customer using direct mail or contact from an Account Manager.</li> <li>Non assigned accounts: These accounts are managed by Business Account Specialist in Allegheny's call center. Direct mail will be sent to these customers with details for all of the Demand Response programs.</li> <li>All marketing brochures will equally promote all demand response programs to encourage customer participation and provide more program details, and will inform customers where they can find a list of all PJM CSP's for participation in the PJM programs.</li> <li>To assist CSPs with attracting customers, Allegheny will provide a list of CSP information on our Act 129 Website and will provide a list of eligible customers to the PJM CSPs.</li> <li>Allegheny will host a Demand Response seminar and invite customers, CSPs and stakeholder to participate. The seminar will focus on providing information on the CLR, CRDR, and DG programs. CSPs will be invited to present information and setup vendor tables. Allegheny w</li> </ol>		

**F.6. Demand Response, Summary of Customer Incentives**

Program	Incentive Source	2010	2011	2012	Total	Estimated Incentive Rates	Formula
Customer Load Response Program	PJM LMP	\$131,250	\$253,750	\$507,500	\$892,500	Estimated Range: \$125 - \$200 per MWhr	Delivery hours x incentive rate x load reduction
	Allegheny Power	\$18,750	\$200,589	\$913,765	\$1,133,104	Estimated Range: \$218 to \$368 per MWhr \$343 to \$568 per MWhr incentive rate (weighted average of nomination rate** less administration adjustment, includes PJM LMP)	
	<b>Gross Customer Incentive (Total)</b>	<b>\$150,000</b>	<b>\$454,339</b>	<b>\$1,421,265</b>	<b>\$2,025,604</b>		
Customer Resources Demand Response Program	PJM LMP	\$ 218,750	\$ 350,000	\$ 700,000	\$1,268,750	Estimated Range: \$125 - \$200 per MWhr	Delivery hours x incentive rate x load reduction
	Allegheny Power	\$ 93,750	\$ 368,900	\$ 1,475,600	\$1,938,250	Estimated Range: \$275 to \$425 per MWhr \$400 to \$625 MWhr incentive rate - <b>NOMINATION RATE FROM CSPs**</b> (includes PJM LMP)	
	<b>Gross CSP Payment (Total)</b>	<b>\$ 312,500</b>	<b>\$ 718,900</b>	<b>\$ 2,175,600</b>	<b>\$ 3,207,000</b>		
Distributed Generation Program	PJM LMP	\$ 35,000	\$ 61,250	\$ 122,500	\$218,750	Estimated Range: \$125 - \$200 per MWhr	Delivery hours x incentive rate x load reduction
	Allegheny Power	\$ 65,000	\$ 104,906	\$ 209,812	\$379,718	Estimated Range: \$275 to \$425 per MWhr \$400 to \$625 per MWhr incentive rate (weighted average of nomination rate**, includes PJM LMP)	
	<b>Gross Customer Incentive (Total)</b>	<b>\$ 100,000</b>	<b>\$ 166,156</b>	<b>\$ 332,312</b>	<b>\$598,468</b>		
<b>Total Customer Incentives</b>		<b>\$562,500</b>	<b>\$1,339,395</b>	<b>\$3,929,177</b>	<b>\$5,831,072</b>		

Notes:

\*\* Nomination rate - to be determined during annual nomination process  
Nomination rate sets the incentive price for the Customer Load Response and Distributed Generation Programs

**F.7. Demand Response, Calculation of Administration Adjustment**

**Calculation of Administrative Adjustment for Customer Load Response Program**

<b>Administration Adjustment</b>		
<b>Adjustment to Customer Load Response Program hourly incentive rate to account for difference in administration with Customer Resources Demand Response Program</b>		
<b>Program</b>	<b>Description</b>	<b>Cost</b>
Customer Load Response Program	Total Administration Cost (2011 and 2012)	\$ 698,398
Customer Resources Demand Response Program	Total Administration Cost (2011 and 2012)	\$ 357,870
	Difference	\$ 340,528
	Total MWhrs delivered in Customer Resources Demand Response Program (2011 and 2012)	6000
	<b>Adjustment (per MWhr)</b>	<b>\$ 57</b>

**F.8. Demand Response, Summary of Administration, Marketing & Evaluation Costs**

**Summary of Administrative, Marketing and Evaluation Costs for Demand Response Programs**

Cost Category	2009	2010	2011	2012	Total	Description
Utility Administration Costs						
Customer Load Response Program	\$257,667	\$330,615	\$345,365	\$353,034	\$1,286,681	2009 based on equal allocation of start-up cost, less allocation to DG program, between CLR and CRDR programs, 2010-2012 based on 3 FTEs per Program Description, \$80,000 plus benefits with escalation
Customer Resources Demand Response Program	\$257,667	\$163,336	\$177,041	\$180,830	\$778,873	2009 based on equal allocation of start-up cost, less allocation to DG program, between CLR and CRDR programs, 2010-2012 based on 1.5 FTEs per Program Description, \$80,000 plus benefits with escalation
Distributed Generation Program	\$51,533	\$53,950	\$55,174	\$56,426	\$217,083	2009 based on allocation of start-up cost based on load ratio share of DG program to total of DG, CLR and CRDR programs, 2010-2012 based on 0.5 FTEs per Program Description, \$80,000 plus benefits with escalation
<b>Total</b>	<b>\$566,868</b>	<b>\$547,902</b>	<b>\$577,579</b>	<b>\$590,289</b>	<b>\$2,282,638</b>	
Marketing Costs						
Customer Load Response Program	\$0	\$6,035	\$6,035	\$0	\$12,070	See working papers for marketing plan estimate
Customer Resources Demand Response Program	\$0	\$6,035	\$6,035	\$0	\$12,070	
Distributed Generation Program	\$0	\$331	\$331	\$0	\$662	
<b>Total</b>	<b>\$0</b>	<b>\$12,401</b>	<b>\$12,401</b>	<b>\$0</b>	<b>\$24,802</b>	
Evaluation Costs						
Customer Load Response Program	\$0	\$0	\$17,500	\$35,000	\$52,500	Based on budgetary estimate per M&V contractor
Customer Resources Demand Response Program	\$0	\$0	\$17,500	\$35,000	\$52,500	
Distributed Generation Program	\$0	\$0	\$8,750	\$17,500	\$26,250	
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$43,750</b>	<b>\$87,500</b>	<b>\$131,250</b>	
Total Costs						
Customer Load Response Program	\$257,667	\$336,650	\$368,900	\$388,034	\$1,351,251	
Customer Resources Demand Response Program	\$257,667	\$169,371	\$200,576	\$215,830	\$843,443	
Distributed Generation Program	\$51,533	\$54,281	\$64,255	\$73,926	\$243,995	
<b>Total</b>	<b>\$566,868</b>	<b>\$560,303</b>	<b>\$633,730</b>	<b>\$677,789</b>	<b>\$2,438,690</b>	

**F.9. Smart Meter Technology Procurement and Installation Plan (SMIP)**

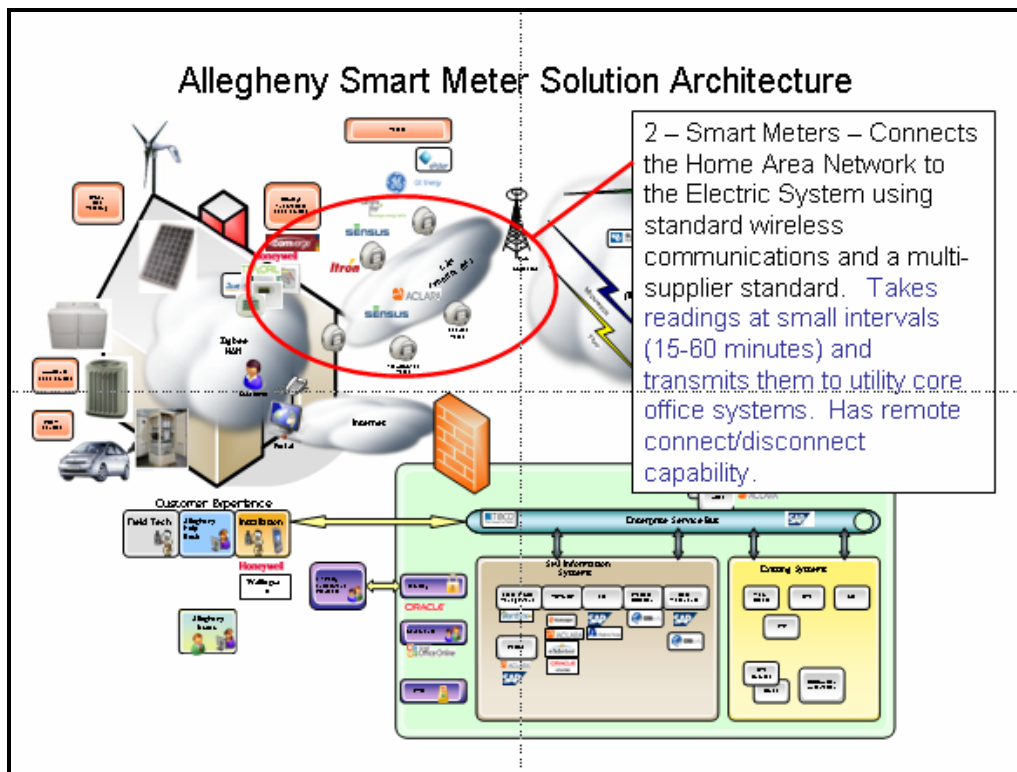
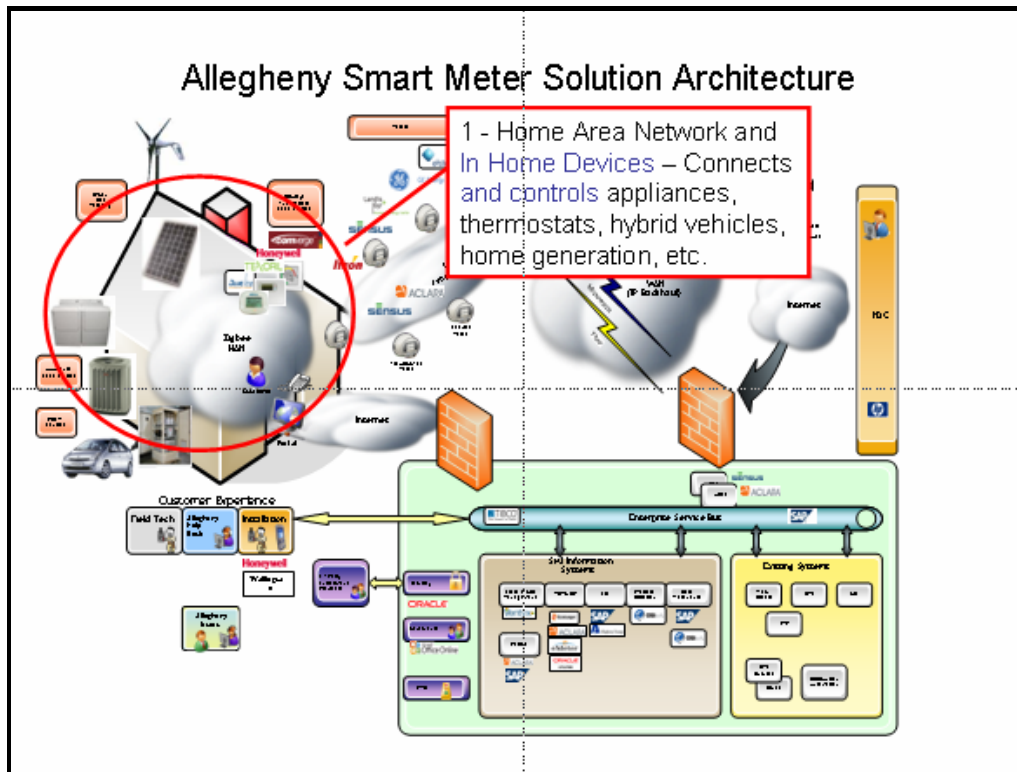
The basic demand response program concept is that smart metering and associated equipment will be installed to convey energy consumption and price information to customers to enable them to better control their monthly energy consumption and their monthly electricity bills. In order to meet its demand reduction targets in 2013, it is necessary to install SMIP and associated Smart Meters, with installation beginning in 2010. The specific SMIP, including schedule and cost information, will be filed with the Commission on or before August 14, 2009. The Company is hopeful that its SMIP and tariff filings will be approved in a timely manner in order for the Company to meet its goals.

There are five basic components of the SMIP as depicted in the following diagrams.

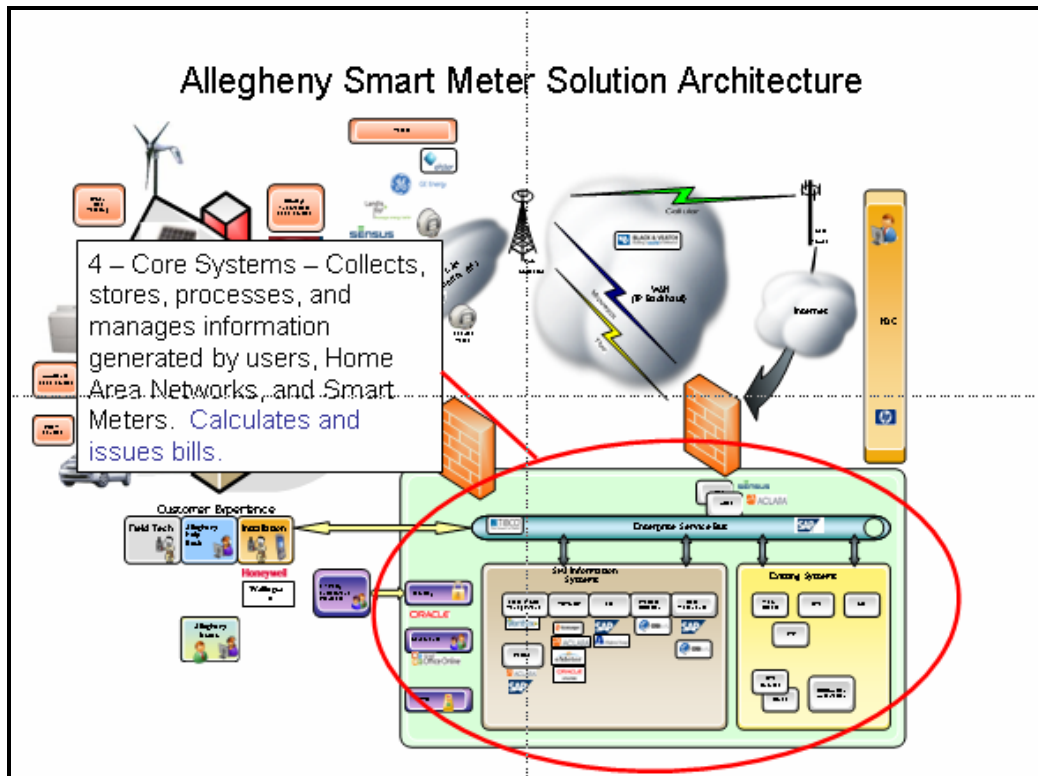
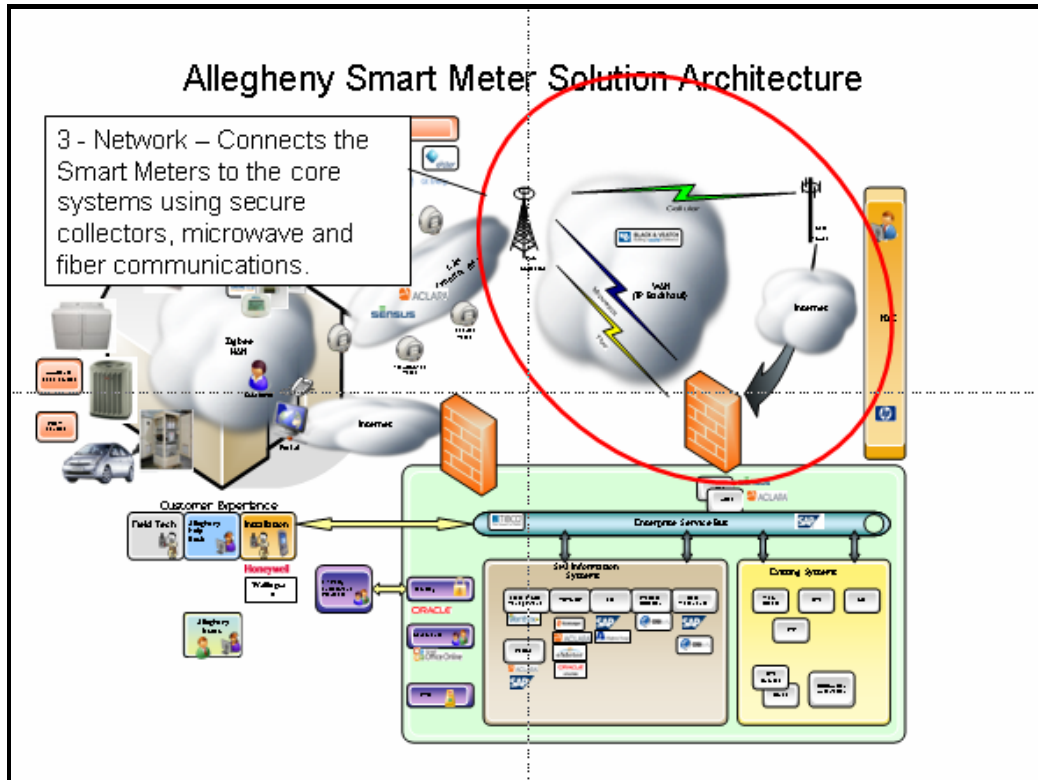
1. Home Area Network and In Home Devices – Connects and controls appliances, thermostats, hybrid vehicles, home generation, etc.
2. Smart Meter – Connects the Home Area Network to the Electric System using standard wireless communications and a multi-supplier standard. Takes readings at small intervals (15-60 minutes) and transmits them to utility core office systems. Has remote connect/disconnect capability.
3. Network – Connects the Smart Meters to the core systems using secure collectors, microwave and fiber communications.
4. Core Systems – Collects, stores, processes, and manages information generated by users, Home Area Networks, and Smart Meters. Calculates and issues bills.
5. Customer Interface – Provides ability for customers and authorized third parties to interact and better manage their electric usage via In Home Devices (e.g. thermostats), Interactive Voice Response system or web portal.

A wide range of benefits other than operational savings have been attributed to Smart Metering investments. The list below provides some of the potential benefits that are specific to EE&C/DR initiatives.

- Increased utility EE, DR, and PR participation.
- Expanded product offerings from competitive retailers.
- Avoided capacity costs.
- Avoided energy costs.
- Enable demand-side generation technologies.
- Facilitate revolutionary technologies like Plug-in-Hybrid Electric Vehicles and on-site renewable generation.
- Conservation effect on energy usage from direct feedback.
- Modernization of electricity industry.
- Accelerate adoption of more efficient devices and technologies.









**Tables for Pennsylvania EDC Energy Efficiency and Conservation Plans**

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**Table 1. Portfolio Summary of Lifetime Costs and Benefits**

**Table 1: Portfolio Summary of Lifetime Costs and Benefits**

**Notes:**

o Net Lifetime Benefits, and TRC per the California Standard Practice Manual

<b>Portfolio</b>	<b>Discount Rate</b>	<b>Total Discounted Lifetime Costs (\$000)</b>	<b>Total Discounted Lifetime Benefits (\$000)</b>	<b>Total Discounted Net Lifetime Benefits (\$000)</b>	<b>Cost-Benefit Ratio</b>	<b>TRC[1]</b>
<b>Residential (exclusive of Low Income)</b>	<b>0.08996</b>	<b>\$43,974</b>	<b>\$104,673</b>	<b>\$60,698</b>	<b>2.4</b>	<b>\$60,698</b>
<b>Residential Low-Income</b>	<b>0.08996</b>	<b>\$6,791</b>	<b>\$9,169</b>	<b>\$2,378</b>	<b>1.4</b>	<b>\$2,378</b>
<b>Commercial/Industrial Small</b>	<b>0.08996</b>	<b>\$55,672</b>	<b>\$304,267</b>	<b>\$248,595</b>	<b>5.5</b>	<b>\$248,595</b>
<b>Commercial/Industrial Large</b>	<b>0.08996</b>	<b>\$12,155</b>	<b>\$48,364</b>	<b>\$36,210</b>	<b>4.0</b>	<b>\$36,210</b>
<b>Governmental/Non-Profit</b>	<b>0.08996</b>	<b>\$8,034</b>	<b>\$57,054</b>	<b>\$49,020</b>	<b>7.1</b>	<b>\$49,020</b>
<b>Total</b>	<b>0.08996</b>	<b>\$126,626</b>	<b>\$523,527</b>	<b>\$396,901</b>	<b>4.1</b>	<b>\$396,901</b>

**Table 2. Summary of Portfolio Energy and Demand Savings****Table 2: Summary of Portfolio Energy and Demand Savings**

o Program Year is June 1 – May 31

MWh Saved for Consumption Reductions kW Saved for Peak Load Reductions	Program Year 2009		Program Year 2010		Program Year 2011		Program Year 2012		
	MWh Saved	kW Saved	MWh Saved	kW Saved	MWh Saved	kW Saved	MWh Saved	kW Saved	
Baseline <sup>1</sup>	20,938,650	3,496,000	20,938,650	3,496,000	20,938,650	3,496,000	20,938,650	3,496,000	
Residential Sector (exclusive of Low-Income) - Cumulative Projected Portfolio Savings <sup>2</sup>	12,100	1,444	72,891	9,260	168,304	26,682	264,458	52,563	
Residential Low-Income Sector - Cumulative Projected Portfolio Savings <sup>2</sup>	979	154	7,903	1,283	12,902	2,031	17,791	2,753	
Commercial/Industrial Small Sector - Cumulative Projected Portfolio Savings <sup>2</sup>	8,307	1,912	66,236	14,727	167,626	38,869	222,734	50,817	
Commercial/Industrial Large Sector - Cumulative Net Weather Adjusted Savings <sup>2</sup>	399	79	23,514	48,191	59,535	86,959	80,078	90,239	
Governmental/Non-Profit Sector - Cumulative Projected Portfolio Savings <sup>2</sup>	2,842	255	38,903	3,043	57,519	5,797	63,997	7,962	
<b>EE&amp;C Plan Total - Cumulative Projected Savings</b>	<b>24,626</b>	<b>3,844</b>	<b>209,446</b>	<b>76,503</b>	<b>465,886</b>	<b>160,338</b>	<b>649,059</b>	<b>204,334</b>	
Percent Reduction From Baseline	0.1%	0.1%	1.0%	2.2%	2.2%	4.6%	3.1%	5.8%	
Commission Identified Goal			<b>209,387</b>					<b>628,160</b>	<b>157,320</b>
Percent Savings Due to Portfolio Above or Below Commission Goal			<b>100.0%</b>					<b>103.3%</b>	<b>101.9%</b>

Percent Savings Due to Portfolio Above or Below Commission Goal for Demand Reduction Target result of 101.9% is calculated based on results at end of 2011 Plan Year (as of May 2012). See Table 2 (Program Level) in Appendix F.3 for the projections of the energy savings and demand reductions by program year by program, including projections with and without the installation of Smart Meter Infrastructure. The Company utilized the load ratio of the primary target customers with and without existing interval metering in arriving at the projections for each program.

**Table 3. Summary of Portfolio Costs****Table 3: Summary of Portfolio Costs**

o Program year is June 1 – May 31

	Program Year 2009		Program Year 2010		Program Year 2011		Program Year 2012	
	Portfolio Budget	% of Portfolio Budget	Portfolio Budget	% of Portfolio Budget	Portfolio Budget	% of Portfolio Budget	Portfolio Budget	% of Portfolio Budget
Residential Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$3,954,548	48%	\$9,879,822	39%	\$13,420,241	44%	\$13,099,688	44%
Residential Low-Income Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$998,929	12%	\$5,028,741	20%	\$3,439,779	11%	\$4,068,896	14%
Commercial/Industrial Small Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$1,599,326	19%	\$5,164,382	20%	\$7,441,254	24%	\$5,215,874	17%
Commercial/Industrial Large Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$1,324,773	16%	\$2,957,013	12%	\$4,555,696	15%	\$6,515,127	22%
Governmental/Non-Profit Portfolio Annual Budget (\$000 and percent of Portfolio Budget)	\$433,350	5%	\$2,376,353	9%	\$1,612,518	5%	\$1,150,206	4%
Total Portfolio Annual Budget	\$8,310,926	100%	\$25,406,310	100%	\$30,469,487	100%	\$30,049,790	100%

**Table 4. Program Summaries**

	Program Name	Program Market	Program Two Sentence Summary	Program Years Operated	Net Lifetime MWh Savings	Net Peak Demand kW Savings	Percentage of Portfolio and Total Lifetime MWh savings	
<b>Residential Portfolio Programs (exclusive of Low Income)</b>	<i>Compact Fluorescent Lighting (CFL) Rewards Program</i>	All residential customers	A rebate program that encourages the purchase of single and multipack CFL's. Mail-in rebates and point-of-sale discounts (where possible) will be offered.	4	627,810	339	39%	9%
	<i>Critical Peak Rebate (CPR) Rate</i>	All residential customers with Smart Metering	A rebate rate offering that encourages customers to lower their energy demand during peak load hours by offering a rebate based on their actual energy demand.	3	2,497	9,513	0%	0%
	<i>Residential Energy Star and High Efficiency Appliance Program</i>	All residential customers	A rebate program that encourages the purchase of certain appliances that meet or exceed Energy Star or other efficiency ratings, through mail-in rebates.	4	440,219	19,894	27%	7%
	<i>Residential Home Performance Program</i>	Single family or multifamily residential dwelling units.	A program that educates customers on EE&C and improves overall home performance by promoting and providing the installation of standard EE&C measures. Includes three home energy audit options. Encourages additional qualified measures through mail-in rebate.	4	462,042	6,418	29%	7%
	<i>Programmable Controllable Thermostat (PCT) Program</i>	All residential customers with Smart Metering	A program that provides automated demand response and reduces energy usage during peak load hours through the direct load control of air conditioners. Customers will receive a credit on their bill for participation in this program.	3	2,497	9,513	0%	0%
	<i>Residential HVAC Efficiency Program</i>	All residential customers with air conditioners or heat pumps.	A rebate program that encourages customers to purchase high efficiency air conditioners or heat pumps. Mail-in rebates will be offered for central air conditioners or heat pumps that exceed certain efficiency ratings.	4	69,152	5,515	4%	1%
	<i>Residential Efficiency Rewards Rate</i>	All residential customers with Smart Metering	A rate offering that encourages customers to lower their energy consumption from historical levels. Customers will be provided a credit/discount on their bill based on their actual reduction in energy usage.	3	11,024	959	1%	0%
	<i>Pay Ahead Smart Service Rate</i>	All residential customers with Smart Metering	A billing option that provides customers with a better understanding of their energy usage and the impact on their electric bill. Customers will be provided information regarding their energy usage and account balance to support customer efficiency initiatives.	3	4,724	411	0%	0%
Totals for Residential Sector					1,619,964	52,563	100%	24%
<b>Residential Low-Income Sector Programs</b>	<i>Residential Low Income Home Performance Check-Up Audit &amp; Appliance Replacement Program</i>	Residential customers up to 150% of the federal poverty level.	A program that educates customers on EE&C and improves overall home performance by providing the installation of EE&C measures. Includes replacement of refrigerators and room air conditioners that meet certain qualifications.	4	36,427	1,193	26%	1%
	<i>Residential Low Income Joint Utility Usage Management Program</i>	Residential customers up to 200% of the federal poverty level.	A program that leverages resources and funding to provide comprehensive energy saving measures and weatherization services to low income customers through partnership with gas utilities.	4	101,868	1,210	72%	2%
	<i>Residential Low Income Room Air Conditioner Replacement Measure</i>	Residential Low Income Usage Reduction Program (LIURP) customers.	A program that provides replacement of room air conditioners meeting certain qualifications as an add-on to the Company's existing Low Income Usage Reduction Program.	4	4,010	351	3%	0%
	Totals for Low-Income Sector					142,305	2,753	100%
<b>Governmental / Non-Profit Portfolio Programs</b>	<i>Governmental/Non-Profit Lighting Efficiency Program</i>	All government, school and non-profit customers with lighting.	A rebate program that encourages customers to upgrade lighting systems to more efficiency lighting technologies. Mail-in rebates and/or product buy-downs will be offered for certain lighting replacements or installations including CFL's, T8, LED Exit Signs and LED Traffic Signals.	4	588,345	7,962	100%	9%
	Totals for Gov't/NP Sector Programs					588,345	7,962	100%

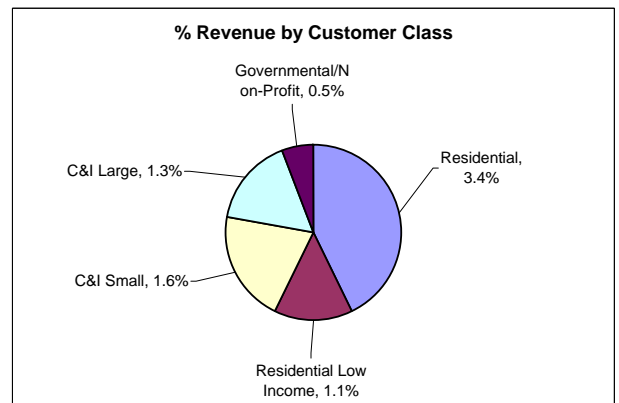
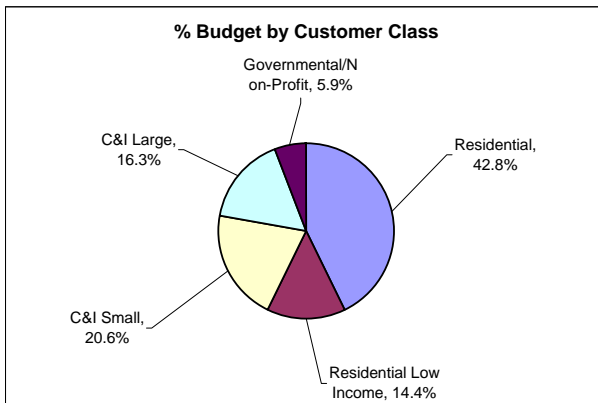
	Program Name	Program Market	Program Two Sentence Summary	Program Years Operated	Net Lifetime MWh Savings	Net Peak Demand kW Savings	Percentage of Portfolio and Total Lifetime MWh savings	
Commercial/Industrial Small Portfolio Programs	Commercial HVAC Efficiency Program	Small commercial and industrial and governmental/non-profit customers with air conditioners or heat pumps.	A rebate program that encourages customers to purchase high efficiency air conditioners or heat pumps. Mail-in rebates will be offered for central air conditioners or heat pumps that exceed certain efficiency ratings.	4	60,246	2,522	2%	1%
	Commercial Lighting Efficiency Program	Small and large commercial and industrial and governmental/non-profit customers with lighting.	A rebate program that encourages customers to upgrade lighting systems to more efficiency lighting technologies. Mail-in rebates will be offered for certain lighting replacements or installations including T8, T5, LED Exit Sign and Occupancy Sensors.	4	3,047,224	42,701	94%	46%
	Contracted Demand Response Program	Small and large commercial and industrial customers and governmental/non-profit customers.	A program that provides demand response with participating customers through a third party demand response provider. Customers will receive payment for their participation in demand response events.	0	0	0	0%	0%
	Custom Technology Applications Program	Small and large commercial and industrial customers and governmental/non-profit customers.	An incentive program that encourages energy and demand reductions by providing incentives for qualified projects that improve energy efficiency of customer processes and applications.	3	127,876	2,235	4%	2%
	Time of Use (TOU) with Critical Peak Pricing Rate	Small commercial and industrial customers and governmental/non-profit customers, with Smart Metering.	A rate offering that encourages customers to lower their demand and energy consumption during on-peak and peak load periods by charging a higher price during these periods and a lower price during off-peak periods, that reflects the cost of serving customers during these periods.	3	7,638	2,856	0%	0%
	Hourly Pricing Option (HPO) Rate	Small commercial and industrial customers and governmental/non-profit customers, with Smart Metering.	A rate offering that encourages customers to lower their demand and energy consumption during higher priced periods and/or shift usage to lower priced periods. Billing is calculated from the PJM hourly market pricing for the AP zone.	3	1,348	504	0%	0%
Totals for C/I Small Sector					3,244,333	50,817	100%	48%
Commercial/Industrial Large Portfolio Programs	Custom Applications Program	Large commercial and industrial customers with at least 2,500,000 kWh's energy usage per year.	An incentive program that encourages energy and demand reductions by providing incentives for qualified projects that improve energy efficiency of customer processes and applications.	3	901,721	11,793	82%	13%
	Customer Load Response Program	Small and large commercial and industrial customers and governmental/non-profit customers, with Smart Metering.	A program that provides demand response with participating customers by contracting with customers for load reduction during peak load hours. Customers will receive payment for their participation in Company demand response events.	3	5,100	29,000	0%	0%
	Customer Resources Demand Response Program	Small and large commercial and industrial customers and governmental/non-profit customers	A program that provides demand response with participating customers by deploying customer load during peak load hours. The Company will contract with PJM curtailment service providers for load resources for participation in Company demand response events.	3	7,250	40,000	1%	0%
	Distributed Generation Program	Small and large commercial and industrial customers and governmental/non-profit customers, with stand-by generation resources.	A program that provides demand response with participating customers by deploying customer-owned standby generation during peak load hours. The Company will contract with a third party dispatchable generation provider to operate, maintain and dispatch a customer's standby generator.	3	1,250	7,000	0%	0%
	Commercial and Industrial Drives Program	Small and large commercial and industrial customers and governmental/non-profit customers.	A rebate program that improves customer process efficiency by applying variable frequency drives to existing applications or process loads. Mail-in rebates will be offered for qualifying installations.	4	185,456	2,446	17%	3%
Totals for C/I Large Sector					1,100,777	90,239	100%	16%
<b>Total for Plan</b>					<b>6,695,723</b>	<b>204,334</b>	<b>100%</b>	



**Table 5. Budget and Parity Analysis Summary**

**Table 5: Budget and Parity Analysis Summary**  
 o Through program year 2012

Customer Class	Budget	% of Total EDC Budget	% of Total Budget Excluding Other Expenditures	% of Total Customer Revenue	Difference
Residential	\$40,354,300	43%	43%	3.4%	39.4%
Residential Low Income	\$13,536,344	14%	14%	1.1%	13.2%
<b>Residential Subtotal</b>	<b>\$ 53,890,644</b>	<b>57%</b>	<b>57%</b>	<b>4.6%</b>	<b>52.6%</b>
C&I Small	\$19,420,835	21%	21%	1.6%	19.0%
C&I Large	\$15,352,608	16%	16%	1.3%	15.0%
<b>C&amp;I Subtotal</b>	<b>\$ 34,773,444</b>	<b>37%</b>	<b>37%</b>	<b>3.0%</b>	<b>33.9%</b>
Governmental/Non-Profit	\$5,572,427	6%	6%	0.5%	5.4%
<b>Governmental/Non-Profit Subtotal</b>	<b>\$ 5,572,427</b>	<b>6%</b>	<b>6%</b>	<b>0.5%</b>	<b>5.4%</b>
<b>Residential/C&amp;I/Governmental/Non-Profit Subtotal</b>	<b>\$ 94,236,514</b>	<b>100%</b>	<b>100%</b>	<b>\$1,178,130,105</b>	
Other Expenditures		0%			
<b>Other Expenditures Subtotal</b>	<b>0</b>	<b>0</b>			
<b>EDC TOTAL</b>	<b>\$ 94,236,514</b>	<b>100%</b>			



**Table 6. Cost Recovery**

**A. Portfolio-specific Assignment of EE&C Costs**

Table 6A: Portfolio-Specific Assignment of EE&C Costs

Residential Portfolio (including Low-Income)							
EE&C Program	Cost Elements (\$)						Totals
	Administration Costs	Marketing Costs	Outside Services Costs	Evaluation Costs	Customer Incentive Costs	Utility Capital Equipment Costs	
CFL Rewards Program	\$0	\$0	\$0	\$0	\$1,503,787	\$0	\$1,503,787
Critical Peak Rebate Rate Offering	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Energy Star Appliance Program	\$0	\$0	\$5,165,663	\$0	\$5,440,256	\$0	\$10,605,918
Home Performance Program	\$391,805	\$0	\$3,300,154	\$0	\$6,542,005	\$0	\$10,233,963
Low Income Home Performance Check-Up & Appliance Replacement Program	\$17,798	\$0	\$512,273	\$0	\$4,217,710	\$0	\$4,747,781
Low Income Joint Utility Usage Management Program	\$41,781	\$0	\$512,273	\$0	\$5,167,398	\$0	\$5,721,452
Low Income Room Air Conditioner Replacement Program	\$6,526	\$0	\$0	\$0	\$1,152,914	\$0	\$1,159,439
Programmable Controllable Thermostat Demand Response Program	\$0	\$0	\$0	\$0	\$906,988	\$0	\$906,988
Residential HVAC Efficiency Program	\$0	\$0	\$0	\$0	\$1,798,179	\$0	\$1,798,179
Residential Rewards - Pay Ahead Services Rate Offerings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
							\$0
<b>Totals</b>	<b>\$457,909</b>	<b>\$0</b>	<b>\$9,490,363</b>	<b>\$0</b>	<b>\$26,729,236</b>	<b>\$0</b>	<b>\$36,677,508</b>

Table 6A: Portfolio-Specific Assignment of EE&C Costs

Small Commercial/Industrial Portfolio							
EE&C Program	Cost Elements (\$)						Totals
	Administration Costs	Marketing Costs	Outside Services Costs	Evaluation Costs	Customer Incentive Costs	Utility Capital Equipment Costs	
Commercial HVAC Efficiency Program	\$0	\$0	\$0	\$0	\$928,884	\$0	\$928,884
Commercial Lighting Efficiency Program	\$0	\$0	\$0	\$0	\$10,834,735	\$0	\$10,834,735
Custom Commercial Program	\$0	\$0	\$537,613	\$0	\$2,681,390	\$0	\$3,219,003
Time of Use - Hourly Rate Offerings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
							\$0
<b>Totals</b>	<b>\$0</b>	<b>\$0</b>	<b>\$537,613</b>	<b>\$0</b>	<b>\$14,445,009</b>	<b>\$0</b>	<b>\$14,982,622</b>

Large Commercial/Industrial Portfolio							
EE&C Program	Cost Elements (\$)						Totals
	Administration Costs	Marketing Costs	Outside Services Costs	Evaluation Costs	Customer Incentive Costs	Utility Capital Equipment Costs	
Commercial & Industrial Custom Applications Program	\$0	\$0	\$413,736	\$0	\$4,939,000	\$0	\$5,352,736
Customer Load Response Program	\$685,134	\$0	\$0	\$0	\$1,133,105	\$0	\$1,818,239
Customer Resources for Demand Response	\$20,000	\$0	\$0	\$0	\$1,938,250	\$0	\$1,958,250
Distributed Generation Program	\$0	\$0	\$0	\$0	\$379,718	\$0	\$379,718
Variable Frequency Drives Program	\$0	\$0	\$0	\$0	\$2,139,528	\$0	\$2,139,528
							\$0
<b>Totals</b>	<b>\$705,134</b>	<b>\$0</b>	<b>\$413,736</b>	<b>\$0</b>	<b>\$10,529,601</b>	<b>\$0</b>	<b>\$11,648,471</b>

Table 6A: Portfolio-Specific Assignment of EE&C Costs

Governmental/Non-Profit Portfolio							
EE&C Program	Cost Elements (\$)						Totals
	Administration Costs	Marketing Costs	Outside Services Costs	Evaluation Costs	Customer Incentive Costs	Utility Capital Equipment Costs	
Governmental/Non-Profit Lighting Program	\$0	\$0	\$0	\$0	\$3,933,464	\$0	\$3,933,464
							\$0
<b>Totals</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,933,464</b>	<b>\$0</b>	<b>\$3,933,464</b>

### B. Allocation of Common Costs to Applicable Customer Segment

Table 6B: Allocation of Common Costs to Applicable Customer Sector

Common Cost Element	Total Cost (\$)	Basis for Cost Allocation	Class Cost Allocaton (\$)			
			Residential (Including Low-Income)	Commercial/Industrial -- Small	Commercial/Industrial -- Large	Governmental/Non-profit
Administration Costs	\$12,350,100	Energy usage, program level and measure share allocation	\$5,305,329	\$3,019,079	\$3,246,690	\$779,002
Marketing Costs	\$9,726,523	Program and measure level marketing plan	\$8,852,571	\$471,750	\$100,282	\$301,920
Outside Services Costs	\$637,560	Program requirements and participation levels	\$606,249	\$29,845	\$895	\$571
Evaluation Costs	\$4,280,266	Program level EMV plan	\$2,448,987	\$917,540	\$356,270	\$557,470
Customer Incentive Costs	\$0		\$0	\$0	\$0	\$0
Utility Capital Equipment Costs	\$0		\$0	\$0	\$0	\$0
<b>Totals</b>	<b>\$26,994,449</b>		<b>\$17,213,136</b>	<b>\$4,438,213</b>	<b>\$3,704,138</b>	<b>\$1,638,962</b>

### C. Summary of Portfolio EE&C Costs

Table 6C: Summary of Portfolio EE&C Costs

Portfolio	Total Sector Portfolio-specific Costs	Total Common Costs	Total of All Costs
Residential (Including Low-Income)	\$36,677,508	\$17,213,136	\$53,890,644
Commercial/Industrial -- Small	\$14,982,622	\$4,438,213	\$19,420,835
Commercial/Industrial -- Large	\$11,648,471	\$3,704,138	\$15,352,608
Governmental/Non-profit	\$3,933,464	\$1,638,962	\$5,572,427
<b>Totals</b>	<b>\$67,242,065</b>	<b>\$26,994,449</b>	<b>\$94,236,514</b>

Table 7. TRC Benefits Table (7A – 7E)

Table 7A: TRC Benefits Table

Residential	TRC Benefits By Program Per Year (\$000)												
	Program	Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity Annual		Energy Annual		Load Reductions in kW		MWh Saved	
						Generation	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime
CFL Rewards Program	1		-\$118,202	\$630,798	\$512,596	\$1,439	\$192,644	\$124,562	\$193,950	19	19	7,002	7,002
	2		\$1,361,795	\$1,206,660	\$2,568,455	\$5,966	\$877,441	\$670,673	\$1,014,375	68	87	24,960	31,963
	3		\$4,860,631	\$1,965,628	\$6,826,259	\$9,442	\$2,211,425	\$1,829,200	\$2,776,192	131	218	48,153	80,116
	4		\$9,146,141	\$1,802,065	\$10,948,206	\$2,201	\$3,461,959	\$2,905,321	\$4,578,726	122	339	44,743	124,859
	5		\$11,855,238	\$0	\$11,855,238	\$2,318	\$3,492,230	\$3,256,813	\$5,103,878	0	339	0	124,859
	6		\$9,701,235	\$0	\$9,701,235	\$2,441	\$2,824,297	\$2,682,167	\$4,192,330	0	339	0	95,892
	7		\$7,900,072	\$0	\$7,900,072	\$2,426	\$2,333,697	\$2,187,582	\$3,376,367	0	320	0	75,244
	8		\$6,386,979	\$0	\$6,386,979	\$2,013	\$1,937,018	\$1,734,677	\$2,713,271	0	252	0	59,309
	9		\$3,144,594	\$0	\$3,144,594	\$1,021	\$982,443	\$835,913	\$1,325,217	0	122	0	28,566
Critical Peak Rebate Rate Offering	1		\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0
	2		-\$99,662	\$117,573	\$17,911	\$12,516	\$1,001	\$4,394	\$0	182	182	36	36
	3		\$88,543	\$121,178	\$209,720	\$120,907	\$15,394	\$73,420	\$0	2,788	2,788	558	558
	4		\$230,924	\$123,030	\$353,954	\$61,703	\$52,756	\$239,495	\$0	9,513	9,513	1,903	1,903
Energy Star Appliance Program	1		-\$1,596,717	\$1,903,939	\$3,07,222	\$77,811	\$84,251	\$85,047	\$60,114	1,029	1,029	3,062	3,062
	2		-\$3,833,809	\$5,343,409	\$1,509,600	\$333,359	\$390,877	\$465,040	\$320,323	3,825	4,854	11,176	14,239
	3		-\$4,842,235	\$8,584,563	\$3,742,329	\$535,557	\$1,008,969	\$1,301,302	\$896,501	7,497	12,351	22,315	36,553
	4		-\$2,436,478	\$7,867,034	\$5,430,556	\$129,028	\$1,635,929	\$2,122,353	\$1,543,245	7,542	19,894	22,448	59,001
	5		\$6,691,404	-\$809,140	\$5,882,263	\$135,867	\$1,650,233	\$2,375,321	\$1,720,842	0	19,894	0	59,001
	6		\$6,891,627	-\$827,155	\$6,064,472	\$139,114	\$1,681,557	\$2,471,602	\$1,772,199	0	19,344	0	57,093
	7		\$6,385,393	-\$845,572	\$5,539,821	\$131,410	\$1,556,399	\$2,279,076	\$1,572,936	0	17,353	0	50,182
	8		\$4,981,023	-\$864,398	\$4,116,624	\$106,431	\$1,184,811	\$1,707,898	\$1,117,484	0	13,347	0	36,277
	9		\$3,486,371	-\$883,644	\$2,602,727	\$78,233	\$766,557	\$1,121,110	\$636,826	0	9,317	0	22,289
	10		\$3,585,458	-\$903,318	\$2,682,141	\$82,380	\$807,215	\$1,147,162	\$645,384	0	9,317	0	22,289
	11		\$3,603,223	-\$923,430	\$2,679,793	\$86,171	\$847,518	\$1,117,746	\$628,358	0	9,255	0	22,223
	12		\$3,565,622	-\$894,922	\$2,670,700	\$86,231	\$849,294	\$1,113,013	\$622,162	0	8,796	0	21,448
	13		\$3,081,144	-\$733,188	\$2,347,956	\$77,325	\$745,913	\$957,107	\$567,610	0	7,490	0	17,638
	14		\$1,881,588	-\$375,877	\$1,505,711	\$56,710	\$484,443	\$560,289	\$404,269	0	5,217	0	10,878
	15		\$585,859	\$0	\$585,859	\$35,771	\$191,822	\$148,951	\$209,315	0	3,125	0	4,090
	16		\$260,254	\$0	\$260,254	\$27,955	\$133,424	\$42,213	\$56,663	0	2,319	0	2,702
	17		\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	1,196	0	1,034
	18		\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	600	0	519
Home Performance Program	1		-\$1,621,820	\$1,775,163	\$153,343	\$16,662	\$51,512	\$33,307	\$51,862	220	220	1,872	1,872
	2		-\$2,660,727	\$4,869,376	\$2,208,649	\$184,922	\$692,960	\$529,664	\$801,103	2,472	2,693	23,370	25,243
	3		-\$3,092,223	\$7,032,716	\$3,940,493	\$206,641	\$1,211,289	\$1,001,929	\$1,520,635	3,507	4,766	32,704	43,883
	4		-\$1,672,779	\$6,946,759	\$5,273,980	\$41,626	\$1,654,868	\$1,388,787	\$2,188,699	3,095	6,418	29,950	59,685
	5		\$4,348,614	\$0	\$4,348,614	\$33,920	\$1,271,240	\$1,185,543	\$1,857,911	0	4,967	0	45,451
	6		\$4,261,009	\$0	\$4,261,009	\$35,718	\$1,230,408	\$1,168,489	\$1,826,394	0	4,967	0	41,776
	7		\$4,135,621	\$0	\$4,135,621	\$37,372	\$1,211,003	\$1,135,181	\$1,752,065	0	4,935	0	39,046
	8		\$3,988,853	\$0	\$3,988,853	\$37,834	\$1,198,627	\$1,073,418	\$1,678,973	0	4,745	0	36,700
	9		\$3,556,013	\$0	\$3,556,013	\$36,623	\$1,099,895	\$935,847	\$1,483,648	0	4,362	0	31,981
	10		\$3,117,083	\$0	\$3,117,083	\$35,157	\$986,291	\$816,248	\$1,279,387	0	3,976	0	27,233
	11		\$3,122,536	\$0	\$3,122,536	\$37,020	\$1,038,604	\$797,899	\$1,249,012	0	3,976	0	27,233
	12		\$3,259,141	\$0	\$3,259,141	\$38,983	\$1,093,691	\$837,677	\$1,288,791	0	3,976	0	27,233
	13		\$3,278,090	\$0	\$3,278,090	\$39,100	\$1,097,054	\$841,664	\$1,300,273	0	3,787	0	25,941
	14		\$2,653,539	\$0	\$2,653,539	\$31,955	\$896,781	\$671,827	\$1,052,976	0	2,940	0	20,137
	15		\$1,168,675	\$0	\$1,168,675	\$14,402	\$404,615	\$291,682	\$457,975	0	1,258	0	8,628
Programmable Controllable Thermostat Demand Response Program	1		\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0
	2		-\$253,782	\$271,693	\$17,911	\$12,516	\$1,001	\$4,394	\$0	182	182	36	36
	3		-\$51,048	\$260,769	\$209,720	\$120,907	\$15,394	\$73,420	\$0	2,788	2,788	558	558
	4		\$131,113	\$222,841	\$353,954	\$61,703	\$52,756	\$239,495	\$0	9,513	9,513	1,903	1,903
	5		\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0
Residential HVAC Efficiency Program	1		-\$487,740	\$513,592	\$25,852	\$13,284	\$4,475	\$5,465	\$2,628	176	176	163	163
	2		-\$957,938	\$1,140,341	\$182,403	\$84,882	\$31,420	\$45,111	\$20,990	1,060	1,236	982	1,145
	3		-\$1,345,675	\$1,774,524	\$428,849	\$146,093	\$86,123	\$134,189	\$62,445	2,133	3,369	1,976	3,120
	4		-\$1,205,869	\$1,708,543	\$502,674	\$35,772	\$141,613	\$213,260	\$112,028	2,146	5,515	1,987	5,107
	5		\$542,515	\$0	\$542,515	\$37,668	\$142,852	\$236,933	\$125,062	0	5,515	0	5,107
	6		\$577,326	\$0	\$577,326	\$39,665	\$150,428	\$254,746	\$132,487	0	5,515	0	5,107
	7		\$597,342	\$0	\$597,342	\$41,767	\$158,407	\$264,031	\$133,137	0	5,515	0	5,107
	8		\$611,682	\$0	\$611,682	\$43,981	\$166,809	\$264,854	\$136,039	0	5,515	0	5,107
	9		\$625,525	\$0	\$625,525	\$46,312	\$175,656	\$264,946	\$138,610	0	5,515	0	5,107
	10		\$641,477	\$0	\$641,477	\$48,766	\$184,973	\$266,518	\$141,220	0	5,515	0	5,107
	11		\$643,913	\$0	\$643,913	\$51,351	\$194,784	\$260,066	\$137,712	0	5,515	0	5,107
	12		\$686,875	\$0	\$686,875	\$54,072	\$205,115	\$284,898	\$142,790	0	5,515	0	5,107
	13		\$718,445	\$0	\$718,445	\$56,879	\$214,411	\$296,605	\$150,551	0	5,510	0	5,070
	14		\$719,636	\$0	\$719,636	\$59,515	\$215,717	\$296,675	\$147,728	0	5,475	0	4,844
	15		\$655,416	\$0	\$655,416	\$59,925	\$199,958	\$266,762	\$128,771	0	5,235	0	4,264
	16		\$200,537	\$0	\$200,537	\$49,891	\$150,646	\$0	\$0	0	4,139	0	3,051
	17		\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	2,076	0	1,530
Residential Rewards - Pay Ahead Services Rate Offerings	1		\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0
	2		-\$104,635	\$117,573	\$12,937	\$1,802	\$6,311	\$4,824	\$0	26	26	230	230
	3		\$73,632	\$121,178	\$194,810	\$17,410	\$97,090	\$80,309	\$0	402	402	3,517	3,517
	4		\$497,831	\$123,030	\$620,861	\$8,885	\$332,738	\$279,238	\$0	1,370	1,370	12,001	12,001

Table 7B: TRC Benefits Table

Residential Low-Income	TRC Benefits By Program Per Year (\$000)												
	Program	Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity		Energy		Load Reductions in kW		MWh Saved	
						Annual		Annual		Annual	Lifetime	Annual	Lifetime
						Generation	Trans/Dist	Peak	Off Peak				
Low Income Home Performance Check-Up & Appliance Replacement Program	1	-129,616	\$161,966	\$32,350	\$5,471	\$10,130	\$6,550	\$10,199	72	72	368	368	
	2	-5,555	\$343,541	\$337,986	\$48,687	\$99,061	\$75,717	\$114,521	637	709	3,240	3,609	
	3	\$195,314	\$263,786	\$459,100	\$41,780	\$135,382	\$111,982	\$169,956	255	964	1,296	4,905	
	4	\$282,762	\$257,211	\$539,973	\$7,736	\$168,334	\$141,268	\$222,635	229	1,193	1,167	6,071	
	5	\$584,480	\$0	\$584,480	\$8,146	\$169,806	\$158,359	\$248,170	0	1,193	0	6,071	
	6	\$622,628	\$0	\$622,628	\$8,578	\$178,812	\$169,813	\$265,425	0	1,193	0	6,071	
	7	\$607,064	\$0	\$607,064	\$8,485	\$176,876	\$165,802	\$255,902	0	1,120	0	5,703	
	8	\$268,976	\$0	\$268,976	\$3,858	\$80,429	\$72,028	\$112,661	0	484	0	2,463	
	9	\$130,295	\$0	\$130,295	\$1,924	\$40,119	\$34,135	\$54,116	0	229	0	1,167	
Low Income Joint Utility Usage Management Program	1	-350,189	\$397,946	\$47,756	\$4,761	\$16,204	\$10,477	\$16,314	63	63	589	589	
	2	-1,426,443	\$1,789,105	\$362,662	\$30,418	\$113,766	\$86,957	\$131,520	380	443	3,555	4,144	
	3	-1,021,289	\$1,713,996	\$692,708	\$35,779	\$213,112	\$176,278	\$267,538	382	825	3,576	7,721	
	4	-1,461,400	\$2,461,514	\$1,000,114	\$7,846	\$313,831	\$263,371	\$415,067	385	1,210	3,598	11,319	
	5	\$1,082,743	\$0	\$1,082,743	\$8,262	\$316,575	\$295,234	\$462,672	0	1,210	0	11,319	
	6	\$1,153,496	\$0	\$1,153,496	\$8,700	\$333,366	\$316,589	\$494,841	0	1,210	0	11,319	
	7	\$1,197,167	\$0	\$1,197,167	\$9,161	\$351,047	\$329,068	\$507,891	0	1,210	0	11,319	
	8	\$1,228,173	\$0	\$1,228,173	\$9,646	\$369,667	\$331,051	\$517,809	0	1,210	0	11,319	
	9	\$1,255,736	\$0	\$1,255,736	\$10,158	\$389,273	\$331,214	\$525,091	0	1,210	0	11,319	
	10	\$1,224,388	\$0	\$1,224,388	\$10,139	\$388,589	\$321,594	\$504,066	0	1,147	0	10,730	
	11	\$820,003	\$0	\$820,003	\$7,139	\$273,615	\$210,203	\$329,046	0	767	0	7,174	
	12	\$429,206	\$0	\$429,206	\$3,770	\$144,495	\$110,671	\$170,271	0	385	0	3,598	
Low Income Room Air Conditioner Replacement Program	1	-106,905	\$110,008	\$3,103	\$1,421	\$591	\$778	\$314	19	19	21	21	
	2	-161,487	\$183,451	\$21,964	\$9,014	\$4,116	\$6,361	\$2,472	112	131	128	150	
	3	-114,021	\$149,926	\$35,906	\$10,493	\$7,631	\$12,808	\$4,973	111	242	127	276	
	4	-97,681	\$136,926	\$39,245	\$2,277	\$11,120	\$17,764	\$8,085	109	351	125	401	
	5	\$42,326	\$0	\$42,326	\$2,398	\$11,217	\$19,678	\$9,033	0	351	0	401	
	6	\$45,025	\$0	\$45,025	\$2,525	\$11,812	\$21,176	\$9,513	0	351	0	401	
	7	\$46,456	\$0	\$46,456	\$2,658	\$12,439	\$21,927	\$9,432	0	351	0	401	
	8	\$47,523	\$0	\$47,523	\$2,799	\$13,098	\$21,974	\$9,651	0	351	0	401	
	9	\$48,585	\$0	\$48,585	\$2,948	\$13,793	\$21,981	\$9,864	0	351	0	401	
	10	\$49,695	\$0	\$49,695	\$3,104	\$14,525	\$21,978	\$10,089	0	351	0	401	
	11	\$47,160	\$0	\$47,160	\$3,093	\$14,476	\$20,286	\$9,305	0	332	0	380	
	12	\$33,549	\$0	\$33,549	\$2,155	\$10,084	\$14,909	\$6,402	0	220	0	251	
	13	\$17,513	\$0	\$17,513	\$1,126	\$5,269	\$7,729	\$3,390	0	109	0	125	

Table 7C: TRC Benefits Table

o Submit yearly projections for each program thru final year of that program for TRC evaluation.

Commercial/Industrial Small	TRC Benefits By Program Per Year (\$000)											
	Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity		Energy		Load Reductions in kW		MWh Saved	
					Annual		Annual		Annual	Lifetime	Annual	Lifetime
					Generation	Trans/Dist	Peak	Off Peak				
<b>Commercial HVAC Efficiency Program</b>	1	-\$414,119	\$428,831	\$14,712	\$5,996	\$2,352	\$2,967	\$3,398	79	79	142	142
	2	-\$596,068	\$703,537	\$107,470	\$38,506	\$16,572	\$24,814	\$27,578	482	561	860	1,001
	3	-\$842,831	\$1,112,214	\$269,383	\$66,559	\$45,628	\$74,279	\$82,917	975	1,536	1,740	2,742
	4	-\$754,362	\$1,115,067	\$360,705	\$16,351	\$75,385	\$124,114	\$144,855	986	2,522	1,761	4,503
	5	\$392,976	\$0	\$392,976	\$17,218	\$75,873	\$138,749	\$161,136	0	2,522	0	4,503
	6	\$418,992	\$0	\$418,992	\$18,131	\$79,899	\$148,790	\$172,171	0	2,522	0	4,503
	7	\$434,259	\$0	\$434,259	\$19,092	\$84,139	\$154,621	\$176,408	0	2,522	0	4,503
	8	\$444,188	\$0	\$444,188	\$20,103	\$88,604	\$155,580	\$179,900	0	2,522	0	4,503
	9	\$452,402	\$0	\$452,402	\$21,169	\$93,306	\$155,538	\$182,389	0	2,522	0	4,503
	10	\$464,460	\$0	\$464,460	\$22,291	\$98,257	\$159,103	\$184,808	0	2,522	0	4,503
	11	\$463,074	\$0	\$463,074	\$23,472	\$103,472	\$155,616	\$180,514	0	2,522	0	4,503
	12	\$483,915	\$0	\$483,915	\$24,716	\$108,962	\$163,866	\$186,370	0	2,522	0	4,503
	13	\$502,630	\$0	\$502,630	\$25,887	\$112,796	\$169,832	\$194,115	0	2,508	0	4,426
	14	\$470,151	\$0	\$470,151	\$26,366	\$106,320	\$156,342	\$181,123	0	2,426	0	3,962
	15	\$372,215	\$0	\$372,215	\$25,862	\$85,402	\$120,700	\$140,251	0	2,260	0	3,022
	16	\$181,599	\$0	\$181,599	\$24,413	\$59,691	\$46,051	\$51,444	0	2,026	0	2,006
	17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	1,627	0	1,610
	18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	818	0	810
<b>Commercial Lighting Efficiency Program</b>	1	-\$2,010,555	\$2,646,095	\$635,540	\$138,541	\$135,611	\$141,415	\$219,972	1,833	1,833	8,166	8,166
	2	-\$9,985,835	\$15,812,266	\$5,826,431	\$923,237	\$1,038,048	\$1,285,207	\$1,940,386	11,615	13,447	54,561	62,726
	3	-\$8,185,337	\$27,010,814	\$18,825,477	\$1,506,783	\$2,615,500	\$3,520,780	\$5,340,117	21,314	34,762	94,431	157,157
	4	\$14,589,011	\$14,603,952	\$29,192,963	\$276,863	\$3,401,082	\$4,646,765	\$7,324,143	7,939	42,701	45,991	203,148
	5	\$38,065,313	\$0	\$38,065,313	\$291,536	\$3,423,113	\$5,198,190	\$8,147,530	0	42,701	0	203,148
	6	\$39,669,922	\$0	\$39,669,922	\$306,988	\$3,604,762	\$5,573,439	\$8,712,120	0	42,701	0	203,148
	7	\$40,803,791	\$0	\$40,803,791	\$323,258	\$3,796,051	\$5,792,816	\$8,940,974	0	42,701	0	203,148
	8	\$41,723,962	\$0	\$41,723,962	\$340,391	\$3,997,491	\$5,829,968	\$9,116,695	0	42,701	0	203,148
	9	\$42,574,446	\$0	\$42,574,446	\$358,432	\$4,209,620	\$5,828,302	\$9,239,069	0	42,701	0	203,148
	10	\$43,586,551	\$0	\$43,586,551	\$377,428	\$4,433,007	\$5,968,868	\$9,357,498	0	42,701	0	203,148
	11	\$44,016,876	\$0	\$44,016,876	\$397,432	\$4,668,247	\$5,838,580	\$9,140,765	0	42,701	0	203,148
	12	\$45,405,210	\$0	\$45,405,210	\$418,496	\$4,915,971	\$6,131,476	\$9,433,691	0	42,701	0	203,148
	13	\$47,128,459	\$0	\$47,128,459	\$440,676	\$5,176,841	\$6,467,674	\$9,992,084	0	42,701	0	203,148
	14	\$48,590,435	\$0	\$48,590,435	\$464,032	\$5,451,554	\$6,648,060	\$10,417,849	0	42,701	0	203,148
	15	\$49,715,403	\$0	\$49,715,403	\$488,626	\$5,740,845	\$6,733,718	\$10,573,100	0	42,701	0	203,148
	16	\$42,855,187	\$0	\$42,855,187	\$492,442	\$5,802,487	\$3,904,643	\$5,893,634	0	40,868	0	194,983
	17	\$26,467,958	\$0	\$26,467,958	\$0	\$0	\$0	\$0	0	29,253	0	140,422
	18	\$19,838,003	\$0	\$19,838,003	\$0	\$0	\$0	\$0	0	7,939	0	45,991
	19	\$9,744,422	\$0	\$9,744,422	\$0	\$0	\$0	\$0	0	0	0	0
<b>Custom Commercial Program</b>	1	-\$342,807	\$342,807	\$0	\$0	\$0	\$0	\$0	0	0	0	0
	2	-\$150,071	\$344,848	\$194,777	\$40,776	\$37,497	\$46,407	\$70,097	594	594	2,266	2,266
	3	\$133,652	\$333,950	\$467,603	\$62,964	\$92,225	\$124,095	\$188,319	859	1,453	3,276	5,542
	4	\$325,206	\$334,293	\$659,499	\$14,489	\$142,725	\$194,980	\$307,305	782	2,235	2,984	8,525
	5	\$718,895	\$0	\$718,895	\$15,257	\$143,650	\$218,136	\$341,853	0	2,235	0	8,525
	6	\$766,792	\$0	\$766,792	\$16,065	\$151,273	\$233,878	\$365,576	0	2,235	0	8,525
	7	\$794,558	\$0	\$794,558	\$16,917	\$159,300	\$243,088	\$375,253	0	2,235	0	8,525
	8	\$812,842	\$0	\$812,842	\$17,814	\$167,753	\$244,653	\$382,622	0	2,235	0	8,525
	9	\$827,734	\$0	\$827,734	\$18,758	\$176,655	\$244,583	\$387,739	0	2,235	0	8,525
	10	\$848,986	\$0	\$848,986	\$19,752	\$186,029	\$250,517	\$392,688	0	2,235	0	8,525
	11	\$845,348	\$0	\$845,348	\$20,799	\$195,901	\$245,052	\$383,596	0	2,235	0	8,525
	12	\$881,328	\$0	\$881,328	\$21,901	\$206,297	\$257,260	\$395,870	0	2,235	0	8,525
	13	\$930,973	\$0	\$930,973	\$23,062	\$217,244	\$271,382	\$419,285	0	2,235	0	8,525
	14	\$969,149	\$0	\$969,149	\$24,284	\$228,772	\$278,932	\$437,160	0	2,235	0	8,525
	15	\$992,697	\$0	\$992,697	\$25,571	\$240,912	\$282,552	\$443,661	0	2,235	0	8,525
	16	\$711,544	\$0	\$711,544	\$26,926	\$253,697	\$171,723	\$259,197	0	2,235	0	8,525
	17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	1,641	0	6,259
	18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	782	0	2,984
<b>Time of Use - Hourly Rate Offerings</b>	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0
	2	-\$126,174	\$167,561	\$41,388	\$8,542	\$4,019	\$28,826	\$0	124	124	243	243
	3	\$196,398	\$172,300	\$368,698	\$48,539	\$36,378	\$283,780	\$0	1,120	1,120	2,186	2,186
	4	\$767,754	\$175,312	\$943,066	\$21,782	\$109,786	\$811,498	\$0	3,359	3,359	6,558	6,558

Table 7D: TRC Benefits Table

o Submit yearly projections for each program thru final year of that program for TRC evaluation.

Commercial/Industrial Large		TRC Benefits By Program Per Year (\$000)												
		Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity Annual		Energy Annual		Load Reductions		MWh Saved		
						Generation	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime	
Commercial & Industrial Custom Applications Program		1	-\$340,523	\$340,523	\$0	\$0	\$0	\$0	\$0	\$0	0	0	0	0
		2	\$995,499	\$294,153	\$1,289,653	\$242,221	\$157,147	\$354,090	\$536,195	3,638	3,638	18,522	18,522	
		3	\$3,148,014	\$199,917	\$3,347,931	\$397,615	\$412,992	\$1,005,875	\$1,531,448	5,822	9,460	29,635	48,157	
		4	\$3,719,956	\$196,067	\$3,916,023	\$74,144	\$521,780	\$1,288,370	\$2,031,728	2,333	11,793	11,958	60,115	
		5	\$4,290,064	\$0	\$4,290,064	\$78,074	\$528,288	\$1,434,850	\$2,248,852	0	11,793	0	60,115	
		6	\$4,577,704	\$0	\$4,577,704	\$82,212	\$556,351	\$1,536,967	\$2,402,173	0	11,793	0	60,115	
		7	\$4,739,984	\$0	\$4,739,984	\$86,569	\$585,906	\$1,598,936	\$2,468,573	0	11,793	0	60,115	
		8	\$4,833,353	\$0	\$4,833,353	\$91,157	\$617,031	\$1,608,618	\$2,516,548	0	11,793	0	60,115	
		9	\$4,902,629	\$0	\$4,902,629	\$95,989	\$649,808	\$1,607,371	\$2,549,461	0	11,793	0	60,115	
		10	\$5,010,784	\$0	\$5,010,784	\$101,076	\$684,328	\$1,645,404	\$2,579,976	0	11,793	0	60,115	
		11	\$4,958,212	\$0	\$4,958,212	\$106,433	\$720,681	\$1,610,255	\$2,520,843	0	11,793	0	60,115	
		12	\$5,159,918	\$0	\$5,159,918	\$112,074	\$758,965	\$1,689,246	\$2,599,633	0	11,793	0	60,115	
		13	\$5,447,901	\$0	\$5,447,901	\$118,014	\$799,283	\$1,780,332	\$2,750,272	0	11,793	0	60,115	
		14	\$5,661,040	\$0	\$5,661,040	\$124,269	\$841,742	\$1,828,432	\$2,866,596	0	11,793	0	60,115	
		15	\$5,773,820	\$0	\$5,773,820	\$130,855	\$886,458	\$1,850,168	\$2,906,339	0	11,793	0	60,115	
		16	\$3,905,588	\$0	\$3,905,588	\$137,790	\$933,548	\$1,129,410	\$1,704,840	0	11,793	0	60,115	
		17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	8,155	0	41,593	
		18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	2,333	0	11,958	
Customer Load Response Program		1	-\$257,667	\$257,667	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
		2	\$725,356	\$367,025	\$1,092,382	\$998,574	\$6,363	\$87,444	\$0	15,000	15,000	750	750	
		3	\$836,032	\$580,339	\$1,416,371	\$1,218,892	\$12,435	\$185,044	\$0	29,000	29,000	1,450	1,450	
		4	-\$738,201	\$1,301,799	\$563,598	\$182,324	\$25,171	\$356,103	\$0	29,000	29,000	2,900	2,900	
Customer Resources for Demand Response		1	-\$257,667	\$257,667	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
		2	\$1,538,140	\$282,496	\$1,820,636	\$1,664,291	\$10,605	\$145,740	\$0	25,000	25,000	1,250	1,250	
		3	\$1,372,515	\$581,101	\$1,953,615	\$1,681,231	\$17,152	\$255,233	\$0	40,000	40,000	2,000	2,000	
		4	-\$914,053	\$1,691,430	\$777,377	\$251,482	\$34,719	\$491,176	\$0	40,000	40,000	4,000	4,000	
Distributed Generation Program		1	-\$51,533	\$51,533	\$0	\$0	\$0	\$0	\$0	0	0	0	0	
		2	\$120,272	\$169,281	\$289,553	\$266,287	\$1,697	\$21,569	\$0	4,000	4,000	200	200	
		3	\$81,872	\$256,661	\$338,533	\$294,215	\$3,002	\$41,316	\$0	7,000	7,000	350	350	
		4	-\$302,893	\$432,487	\$129,594	\$44,009	\$6,076	\$79,509	\$0	7,000	7,000	700	700	
Variable Frequency Drives Program		1	-\$468,775	\$495,518	\$26,744	\$5,783	\$3,404	\$12,717	\$4,841	79	79	399	399	
		2	-\$965,025	\$1,168,935	\$203,909	\$36,763	\$23,687	\$104,721	\$38,739	473	552	2,393	2,792	
		3	-\$1,547,597	\$2,101,581	\$553,984	\$63,000	\$64,987	\$310,459	\$115,538	947	1,499	4,786	7,578	
		4	-\$1,352,592	\$2,199,359	\$846,767	\$15,375	\$107,314	\$525,661	\$198,417	947	2,446	4,786	12,364	
		5	\$771,572	\$159,116	\$930,688	\$16,190	\$108,652	\$586,367	\$219,479	0	2,446	0	12,364	
		6	\$831,460	\$162,658	\$994,118	\$17,048	\$114,424	\$627,601	\$235,045	0	2,446	0	12,364	
		7	\$868,485	\$166,280	\$1,034,765	\$17,952	\$120,503	\$653,355	\$242,955	0	2,446	0	12,364	
		8	\$881,156	\$169,982	\$1,051,138	\$18,903	\$126,904	\$657,786	\$247,544	0	2,446	0	12,364	
		9	\$887,527	\$173,767	\$1,061,294	\$19,905	\$133,645	\$657,297	\$250,446	0	2,446	0	12,364	
		10	\$912,684	\$177,635	\$1,090,319	\$20,960	\$140,745	\$675,595	\$253,019	0	2,446	0	12,364	
		11	\$897,292	\$181,590	\$1,078,882	\$22,071	\$148,222	\$661,317	\$247,272	0	2,446	0	12,364	
		12	\$935,400	\$185,633	\$1,121,033	\$23,241	\$156,095	\$687,055	\$254,641	0	2,446	0	12,364	
		13	\$993,479	\$189,767	\$1,183,246	\$24,473	\$164,388	\$725,340	\$269,046	0	2,446	0	12,364	
		14	\$1,029,028	\$193,992	\$1,223,020	\$25,770	\$173,120	\$743,503	\$280,627	0	2,446	0	12,364	
		15	\$1,049,638	\$198,311	\$1,247,949	\$27,136	\$182,317	\$754,279	\$284,217	0	2,446	0	12,364	
		16	\$727,752	\$196,187	\$923,939	\$27,652	\$185,808	\$521,654	\$188,825	0	2,367	0	11,965	
		17	-\$160,444	\$160,444	\$0	\$0	\$0	\$0	\$0	0	1,893	0	9,572	
		18	-\$82,008	\$82,008	\$0	\$0	\$0	\$0	\$0	0	947	0	4,786	

Table 7E: TRC Benefits Table

Governmental/Non-Profit		TRC Benefits By Program Per Year (\$000)											
		Program Year	TRC	Program Costs (\$000)	Program Benefits (\$000)	Capacity Annual		Energy Annual		Load Reductions in kW		MWh Saved	
						Generation	Trans/Dist	Peak	Off Peak	Annual	Lifetime	Annual	Lifetime
Governmental/Non-Profit Lighting Program		1	-\$328,455	\$520,700	\$192,245	\$19,292	\$47,197	\$49,196	\$76,560	255	255	2,842	2,842
		2	-\$336,589	\$3,263,031	\$2,926,442	\$208,893	\$643,794	\$796,781	\$1,203,518	2,787	3,043	36,061	38,903
		3	\$3,631,499	\$3,040,222	\$6,671,721	\$251,267	\$957,256	\$1,288,050	\$1,954,664	2,754	5,797	18,616	57,519
		4	\$5,547,345	\$2,538,441	\$8,085,785	\$51,623	\$1,071,437	\$1,463,712	\$2,306,937	2,195	7,962	8,416	63,997
		5	\$7,103,542	\$0	\$7,103,542	\$51,869	\$682,081	\$1,035,757	\$1,623,197	0	7,597	0	40,479
		6	\$6,712,960	\$0	\$6,712,960	\$53,734	\$577,498	\$892,851	\$1,395,623	0	7,474	0	32,545
		7	\$6,903,015	\$0	\$6,903,015	\$56,581	\$608,143	\$928,013	\$1,432,567	0	7,474	0	32,545
		8	\$7,058,726	\$0	\$7,058,726	\$59,580	\$640,415	\$933,989	\$1,460,697	0	7,474	0	32,545
		9	\$7,203,391	\$0	\$7,203,391	\$62,738	\$674,399	\$933,720	\$1,480,231	0	7,474	0	32,545
		10	\$7,374,276	\$0	\$7,374,276	\$66,063	\$710,186	\$956,376	\$1,499,124	0	7,474	0	32,545
		11	\$7,452,123	\$0	\$7,452,123	\$69,565	\$747,873	\$935,510	\$1,464,417	0	7,474	0	32,545
		12	\$7,683,246	\$0	\$7,683,246	\$73,251	\$787,559	\$982,116	\$1,511,275	0	7,474	0	32,545
		13	\$7,968,606	\$0	\$7,968,606	\$77,134	\$829,352	\$1,036,029	\$1,600,663	0	7,474	0	32,545
		14	\$8,212,297	\$0	\$8,212,297	\$81,222	\$873,362	\$1,064,852	\$1,668,903	0	7,474	0	32,545
		15	\$8,402,308	\$0	\$8,402,308	\$85,527	\$919,707	\$1,078,671	\$1,693,719	0	7,474	0	32,545
		16	\$7,355,892	\$0	\$7,355,892	\$87,346	\$941,572	\$637,335	\$961,988	0	7,249	0	31,640
		17	\$4,730,704	\$0	\$4,730,704	\$0	\$0	\$0	\$0	0	4,826	0	19,098
		18	\$1,850,945	\$0	\$1,850,945	\$0	\$0	\$0	\$0	0	2,195	0	8,416
		19	\$609,077	\$0	\$609,077	\$0	\$0	\$0	\$0	0	0	0	0

**Chart 1: Gantt Chart of Program Schedule Summary (For Section 1.4)**

Please see the following pages for sector specific implementation schedules.











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**Supporting Cost Documentation: Surcharge Recovery**

Please see the following pages for surcharge cost recovery calculations.

**WEST PENN POWER CO. d/b/a Allegheny Power  
Summary of Program Costs**

	Program Costs
<u>Residential</u>	
Low Income Home Performance & Appliance Program	\$ 5,381,563
Low Income Joint Utility Usage Management Program	\$ 6,362,561
Low Income Room Air Conditioner Replacement Program	\$ 1,792,221
Residential HVAC Efficiency Program	\$ 3,570,672
Residential Energy Star & High Efficiency Appliance Program	\$ 16,557,991
CFL Rewards Program	\$ 3,304,607
Residential Home Performance Program	\$ 14,478,886
Programmable Controllable Thermostat Program	\$ 1,718,584
Critical Peak Rebate Rate Offering	\$ 361,780
Residential Eff. Rewards - Pay Ahead Rate Offering	\$ 361,780
 <u>Non-Residential</u>	
Commercial HVAC Efficiency Program	\$ 2,238,914
Custom Technology Applications Program	\$ 4,201,958
Lighting Efficiency Program	\$ 16,344,533
Time of Use - Hourly Rate Offerings	\$ 515,174
Commercial and Industrial Drives Program	\$ 3,182,185
Customer Load Response Program	\$ 2,484,356
Custom Applications Program	\$ 6,280,660
Customer Resources for Demand Response	\$ 2,781,693
Distributed Generation Program	\$ 623,713
Municipal LED Traffic Signals	\$ 1,692,684
 Total	 \$ 94,236,514

Above costs exclude GRT of 5.9%

WEST PENN POWER CO.  
d/b/a Allegheny Power  
Billed EE&C Surcharge Revenue

Tariff Classification	Program	Nov 2009 - Jan 2010 Surcharge		Allocated Revenue		Feb 2010 Surcharge		Allocated Revenue	
		\$/kWh	\$/kW	with GRT*	without GRT**	\$/kWh	\$/kW	with GRT*	without GRT**
Tariff No. 39, Schedule 10	Low Income Home Performance & Appliance Program	\$ 0.0022	\$ -	\$ 340,045.21	\$ 319,982.54	\$ 0.0022	\$ -	\$ 163,832.11	\$ 154,166.02
	Low Income Joint Utility Usage Management Program	\$ 0.0026	\$ -	\$ 397,814.73	\$ 374,343.66	\$ 0.0026	\$ -	\$ 191,665.19	\$ 180,356.94
	Low Income Room Air Conditioner Replacement Program	\$ 0.0007	\$ -	\$ 113,348.95	\$ 106,661.36	\$ 0.0007	\$ -	\$ 54,610.97	\$ 51,388.92
	Residential HVAC Efficiency Program	\$ 0.0015	\$ -	\$ 232,814.32	\$ 219,078.27	\$ 0.0015	\$ -	\$ 112,168.80	\$ 105,550.84
	Residential Energy Star & High Efficiency Appliance Program	\$ 0.0068	\$ -	\$ 1,054,907.34	\$ 992,667.80	\$ 0.0068	\$ -	\$ 508,249.19	\$ 478,262.48
	CFL Rewards Program	\$ 0.0014	\$ -	\$ 216,543.93	\$ 203,767.84	\$ 0.0014	\$ -	\$ 104,329.81	\$ 98,174.35
	Residential Home Performance Program	\$ 0.0060	\$ -	\$ 920,156.04	\$ 865,866.83	\$ 0.0060	\$ -	\$ 443,326.67	\$ 417,170.40
	Programmable Controllable Thermostat Program	\$ 0.0007	\$ -	\$ 107,377.84	\$ 101,042.55	\$ 0.0007	\$ -	\$ 51,734.12	\$ 48,681.80
	Critical Peak Rebate Rate Offering	\$ 0.0001	\$ -	\$ 23,092.97	\$ 21,730.49	\$ 0.0001	\$ -	\$ 11,126.08	\$ 10,469.64
	Residential Eff. Rewards - Pay Ahead Rate Offering	\$ 0.0001	\$ -	\$ 23,092.97	\$ 21,730.49	\$ 0.0001	\$ -	\$ 11,126.08	\$ 10,469.64
Total		\$ 0.0022	\$ -	\$ 3,429,194.30	\$ 3,226,871.84	\$ 0.0022	\$ -	\$ 1,652,169.01	\$ 1,554,691.04
Tariff No. 39, Schedule 20	Commercial HVAC Efficiency Program	\$ 0.0014	\$ -	\$ 72,192.23	\$ 67,932.89	\$ 0.0014	\$ -	\$ 33,755.09	\$ 31,763.54
	Custom Technology Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Lighting Efficiency Program	\$ 0.0083	\$ -	\$ 418,090.39	\$ 393,423.06	\$ 0.0083	\$ -	\$ 195,487.52	\$ 183,953.76
	Time of Use - Hourly Rate Offerings	\$ 0.0003	\$ -	\$ 15,769.45	\$ 14,838.05	\$ 0.0003	\$ -	\$ 7,373.36	\$ 6,938.33
	Commercial and Industrial Drives Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Customer Load Response Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Municipal LED Traffic Signals	\$ 0.0011	\$ -	\$ 57,353.86	\$ 53,969.99	\$ 0.0011	\$ -	\$ 26,817.08	\$ 25,234.88	
Total		\$ 0.0112	\$ -	\$ 563,405.93	\$ 530,164.98	\$ 0.0112	\$ -	\$ 263,433.06	\$ 247,890.51
Tariff No. 39, Schedule 22	Commercial HVAC Efficiency Program	\$ 0.0015	\$ -	\$ 1,411.15	\$ 1,327.89	\$ 0.0015	\$ -	\$ 713.68	\$ 671.57
	Custom Technology Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Lighting Efficiency Program	\$ 0.0082	\$ -	\$ 7,943.36	\$ 7,474.70	\$ 0.0082	\$ -	\$ 4,017.29	\$ 3,780.27
	Time of Use - Hourly Rate Offerings	\$ 0.0003	\$ -	\$ 296.01	\$ 278.55	\$ 0.0003	\$ -	\$ 149.70	\$ 140.87
	Commercial and Industrial Drives Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Customer Load Response Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Municipal LED Traffic Signals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total		\$ 0.0099	\$ -	\$ 9,650.52	\$ 9,081.14	\$ 0.0099	\$ -	\$ 4,880.67	\$ 4,592.71
Tariff No. 39, Schedule 30 (small)	Commercial HVAC Efficiency Program	\$ 0.0003	\$ 0.05	\$ 50,568.83	\$ 47,585.27	\$ 0.0003	\$ 0.05	\$ 22,085.38	\$ 20,782.35
	Custom Technology Applications Program	\$ 0.0011	\$ 0.06	\$ 96,756.08	\$ 91,047.48	\$ 0.0011	\$ 0.06	\$ 42,257.16	\$ 39,763.99
	Lighting Efficiency Program	\$ 0.0051	\$ 0.13	\$ 292,740.26	\$ 275,468.58	\$ 0.0051	\$ 0.13	\$ 127,851.10	\$ 120,307.89
	Time of Use - Hourly Rate Offerings	\$ 0.0001	\$ 0.01	\$ 11,042.63	\$ 10,391.11	\$ 0.0001	\$ 0.01	\$ 4,822.75	\$ 4,538.20
	Commercial and Industrial Drives Program	\$ 0.0005	\$ 0.02	\$ 33,167.13	\$ 31,210.27	\$ 0.0005	\$ 0.02	\$ 14,485.38	\$ 13,630.75
	Customer Load Response Program	\$ 0.0000	\$ 0.04	\$ 32,638.55	\$ 30,712.88	\$ 0.0000	\$ 0.04	\$ 14,254.53	\$ 13,413.51
	Custom Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Municipal LED Traffic Signals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total		\$ 0.0071	\$ 0.30	\$ 516,913.49	\$ 486,415.59	\$ 0.0071	\$ 0.30	\$ 225,756.31
Tariff No. 39, Schedule 30 (large)	Commercial HVAC Efficiency Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Technology Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Lighting Efficiency Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Time of Use - Hourly Rate Offerings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commercial and Industrial Drives Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Customer Load Response Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Municipal LED Traffic Signals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tariff No. 39, Schedule 40	Commercial HVAC Efficiency Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Technology Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Lighting Efficiency Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Time of Use - Hourly Rate Offerings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commercial and Industrial Drives Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Customer Load Response Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Municipal LED Traffic Signals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tariff No. 39, Schedule 41	Commercial HVAC Efficiency Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Technology Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Lighting Efficiency Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Time of Use - Hourly Rate Offerings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commercial and Industrial Drives Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Customer Load Response Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Municipal LED Traffic Signals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tariff No. 39, Schedule 44	Commercial HVAC Efficiency Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Technology Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Lighting Efficiency Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Time of Use - Hourly Rate Offerings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commercial and Industrial Drives Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Customer Load Response Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Municipal LED Traffic Signals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tariff No. 39, Schedule 46	Commercial HVAC Efficiency Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Technology Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Lighting Efficiency Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Time of Use - Hourly Rate Offerings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commercial and Industrial Drives Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Customer Load Response Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Municipal LED Traffic Signals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tariff No. 37	Commercial HVAC Efficiency Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Technology Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Lighting Efficiency Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Time of Use - Hourly Rate Offerings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Commercial and Industrial Drives Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Customer Load Response Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Custom Applications Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Municipal LED Traffic Signals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total				\$ 4,519,164.24	\$ 4,252,533.55			\$ 2,227,026.49	\$ 2,095,631.93

\*BUNDL GC870 with 5.9% GRT  
\*\*excludes 5.9% GRT



WEST PENN POWER CO.  
db/a Allegheny Power  
Forecasted EE&C Surcharge Revenue

Tariff Classification	Program	Mar-May 2010 Surcharge		Mar-May 2010		Allocated Revenue	
		\$/kWh	\$/kW	kWh	kW	with GRT	without GRT**
Tariff No. 39, Schedule 10	Low Income Home Performance & Appliance Program	\$ 0.00022	\$ -	1,735,355,047	-	\$ 381,590.22	\$ 359,076.40
	Low Income Joint Utility Usage Management Program	\$ 0.00026	\$ -	1,735,355,047	-	\$ 446,417.74	\$ 420,079.09
	Low Income Room Air Conditioner Replacement Program	\$ 0.00007	\$ -	1,735,355,047	-	\$ 127,197.36	\$ 119,692.72
	Residential HVAC Efficiency Program	\$ 0.00015	\$ -	1,735,355,047	-	\$ 261,258.40	\$ 245,844.15
	Residential Energy Star & High Efficiency Appliance Program	\$ 0.00068	\$ -	1,735,355,047	-	\$ 1,183,790.61	\$ 1,113,946.96
	CFL Rewards Program	\$ 0.00014	\$ -	1,735,355,047	-	\$ 243,000.18	\$ 228,663.17
	Residential Home Performance Program	\$ 0.00060	\$ -	1,735,355,047	-	\$ 1,032,576.08	\$ 971,654.09
	Programmable Controllable Thermostat Program	\$ 0.00007	\$ -	1,735,355,047	-	\$ 120,496.72	\$ 113,387.41
	Critical Peak Rebate Rate Offering	\$ 0.00001	\$ -	1,735,355,047	-	\$ 25,914.35	\$ 24,385.40
	Residential Eff. Rewards - Pay Ahead Rate Offering	\$ 0.00001	\$ -	1,735,355,047	-	\$ 25,914.35	\$ 24,385.40
Total	\$ 0.00222	\$ -	1,735,355,047	-	\$ 3,848,156.01	\$ 3,621,114.81	
Tariff No. 39, Schedule 20	Commercial HVAC Efficiency Program	\$ 0.00014	\$ -	624,897,830	-	\$ 89,481.12	\$ 84,201.73
	Custom Technology Applications Program	\$ -	\$ -	624,897,830	-	\$ -	\$ -
	Lighting Efficiency Program	\$ 0.00083	\$ -	624,897,830	-	\$ 518,216.41	\$ 487,641.64
	Time of Use - Hourly Rate Offerings	\$ 0.00003	\$ -	624,897,830	-	\$ 19,545.98	\$ 18,392.77
	Commercial and Industrial Drives Program	\$ -	\$ -	624,897,830	-	\$ -	\$ -
	Customer Load Response Program	\$ -	\$ -	624,897,830	-	\$ -	\$ -
	Custom Applications Program	\$ -	\$ -	624,897,830	-	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ -	624,897,830	-	\$ -	\$ -
	Municipal LED Traffic Signals	\$ 0.00011	\$ -	624,897,830	-	\$ 71,089.20	\$ 66,894.94
	Total	\$ 0.00112	\$ -	624,897,830	-	\$ 698,332.71	\$ 657,131.08
Tariff No. 39, Schedule 22	Commercial HVAC Efficiency Program	\$ 0.00015	\$ -	11,215,504	-	\$ 1,626.75	\$ 1,530.77
	Custom Technology Applications Program	\$ -	\$ -	11,215,504	-	\$ -	\$ -
	Lighting Efficiency Program	\$ 0.00082	\$ -	11,215,504	-	\$ 9,156.95	\$ 8,616.69
	Time of Use - Hourly Rate Offerings	\$ 0.00003	\$ -	11,215,504	-	\$ 341.23	\$ 321.10
	Commercial and Industrial Drives Program	\$ -	\$ -	11,215,504	-	\$ -	\$ -
	Customer Load Response Program	\$ -	\$ -	11,215,504	-	\$ -	\$ -
	Custom Applications Program	\$ -	\$ -	11,215,504	-	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ -	11,215,504	-	\$ -	\$ -
	Municipal LED Traffic Signals	\$ -	\$ -	11,215,504	-	\$ -	\$ -
	Total	\$ 0.00099	\$ -	11,215,504	-	\$ 11,124.93	\$ 10,468.56
Tariff No. 39, Schedule 30 (small)	Commercial HVAC Efficiency Program	\$ 0.00003	\$ 0.05	979,149,063	2,518,815	\$ 144,301.06	\$ 135,787.30
	Custom Technology Applications Program	\$ 0.00011	\$ 0.06	979,149,063	2,518,815	\$ 273,908.09	\$ 257,747.51
	Lighting Efficiency Program	\$ 0.00051	\$ 0.13	979,149,063	2,518,815	\$ 822,947.74	\$ 774,393.82
	Time of Use - Hourly Rate Offerings	\$ 0.00001	\$ 0.01	979,149,063	2,518,815	\$ 31,462.50	\$ 29,606.21
	Commercial and Industrial Drives Program	\$ 0.00005	\$ 0.02	979,149,063	2,518,815	\$ 93,513.41	\$ 87,996.12
	Customer Load Response Program	\$ 0.00000	\$ 0.04	979,149,063	2,518,815	\$ 93,737.66	\$ 88,207.14
	Custom Applications Program	\$ -	\$ -	979,149,063	2,518,815	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ -	979,149,063	2,518,815	\$ -	\$ -
	Municipal LED Traffic Signals	\$ -	\$ -	979,149,063	2,518,815	\$ -	\$ -
	Total	\$ 0.00071	\$ 0.30	979,149,063	2,518,815	\$ 1,459,870.46	\$ 1,373,738.10
Tariff No. 39, Schedule 30 (large)	Commercial HVAC Efficiency Program	\$ -	\$ -	-	1,242,677	\$ -	\$ -
	Custom Technology Applications Program	\$ -	\$ 0.15	-	1,242,677	\$ 182,530.85	\$ 171,761.53
	Lighting Efficiency Program	\$ -	\$ 0.15	-	1,242,677	\$ 186,587.35	\$ 175,578.70
	Time of Use - Hourly Rate Offerings	\$ -	\$ -	-	1,242,677	\$ -	\$ -
	Commercial and Industrial Drives Program	\$ -	\$ 0.06	-	1,242,677	\$ 69,058.12	\$ 64,983.69
	Customer Load Response Program	\$ -	\$ 0.05	-	1,242,677	\$ 63,286.39	\$ 59,552.49
	Custom Applications Program	\$ -	\$ -	-	1,242,677	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ 0.14	-	1,242,677	\$ 170,719.94	\$ 160,647.46
	Municipal LED Traffic Signals	\$ -	\$ -	-	1,242,677	\$ -	\$ -
	Total	\$ -	\$ 0.54	-	1,242,677	\$ 672,182.65	\$ 632,523.87
Tariff No. 39, Schedule 40	Commercial HVAC Efficiency Program	\$ -	\$ -	-	1,504,427	\$ -	\$ -
	Custom Technology Applications Program	\$ -	\$ -	-	1,504,427	\$ -	\$ -
	Lighting Efficiency Program	\$ -	\$ -	-	1,504,427	\$ -	\$ -
	Time of Use - Hourly Rate Offerings	\$ -	\$ -	-	1,504,427	\$ -	\$ -
	Commercial and Industrial Drives Program	\$ -	\$ 0.06	-	1,504,427	\$ 83,604.06	\$ 78,671.42
	Customer Load Response Program	\$ -	\$ 0.05	-	1,504,427	\$ 76,616.61	\$ 72,096.23
	Custom Applications Program	\$ -	\$ -	-	1,504,427	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ 0.14	-	1,504,427	\$ 206,679.25	\$ 194,485.17
	Municipal LED Traffic Signals	\$ -	\$ -	-	1,504,427	\$ -	\$ -
	Total	\$ -	\$ 0.24	-	1,504,427	\$ 366,899.92	\$ 345,252.82
Tariff No. 39, Schedule 41	Commercial HVAC Efficiency Program	\$ -	\$ -	-	30,335	\$ -	\$ -
	Custom Technology Applications Program	\$ -	\$ -	-	30,335	\$ -	\$ -
	Lighting Efficiency Program	\$ -	\$ -	-	30,335	\$ -	\$ -
	Time of Use - Hourly Rate Offerings	\$ -	\$ -	-	30,335	\$ -	\$ -
	Commercial and Industrial Drives Program	\$ -	\$ 0.06	-	30,335	\$ 1,685.78	\$ 1,586.32
	Customer Load Response Program	\$ -	\$ 0.05	-	30,335	\$ 1,544.88	\$ 1,453.73
	Custom Applications Program	\$ -	\$ -	-	30,335	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ 0.14	-	30,335	\$ 4,167.44	\$ 3,921.56
	Municipal LED Traffic Signals	\$ -	\$ -	-	30,335	\$ -	\$ -
	Total	\$ -	\$ 0.24	-	30,335	\$ 7,398.10	\$ 6,961.61
Tariff No. 39, Schedule 44	Commercial HVAC Efficiency Program	\$ -	\$ -	-	26,193	\$ -	\$ -
	Custom Technology Applications Program	\$ -	\$ -	-	26,193	\$ -	\$ -
	Lighting Efficiency Program	\$ -	\$ -	-	26,193	\$ -	\$ -
	Time of Use - Hourly Rate Offerings	\$ -	\$ -	-	26,193	\$ -	\$ -
	Commercial and Industrial Drives Program	\$ -	\$ 0.06	-	26,193	\$ 1,455.60	\$ 1,369.72
	Customer Load Response Program	\$ -	\$ 0.05	-	26,193	\$ 1,333.94	\$ 1,255.24
	Custom Applications Program	\$ -	\$ -	-	26,193	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ 0.14	-	26,193	\$ 3,598.41	\$ 3,386.10
	Municipal LED Traffic Signals	\$ -	\$ -	-	26,193	\$ -	\$ -
	Total	\$ -	\$ 0.24	-	26,193	\$ 6,387.95	\$ 6,011.06
Tariff No. 39, Schedule 46	Commercial HVAC Efficiency Program	\$ -	\$ -	-	672,272	\$ -	\$ -
	Custom Technology Applications Program	\$ -	\$ -	-	672,272	\$ -	\$ -
	Lighting Efficiency Program	\$ -	\$ -	-	672,272	\$ -	\$ -
	Time of Use - Hourly Rate Offerings	\$ -	\$ -	-	672,272	\$ -	\$ -
	Commercial and Industrial Drives Program	\$ -	\$ 0.06	-	672,272	\$ 37,359.55	\$ 35,155.34
	Customer Load Response Program	\$ -	\$ 0.05	-	672,272	\$ 34,237.12	\$ 32,217.13
	Custom Applications Program	\$ -	\$ -	-	672,272	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ 0.14	-	672,272	\$ 92,357.29	\$ 86,908.21
	Municipal LED Traffic Signals	\$ -	\$ -	-	672,272	\$ -	\$ -
	Total	\$ -	\$ 0.24	-	672,272	\$ 163,953.96	\$ 154,280.68
Tariff No. 37	Commercial HVAC Efficiency Program	\$ -	\$ -	-	155,100	\$ -	\$ -
	Custom Technology Applications Program	\$ -	\$ -	-	155,100	\$ -	\$ -
	Lighting Efficiency Program	\$ -	\$ 0.15	-	155,100	\$ 23,288.18	\$ 21,914.18
	Time of Use - Hourly Rate Offerings	\$ -	\$ -	-	155,100	\$ -	\$ -
	Commercial and Industrial Drives Program	\$ -	\$ 0.06	-	155,100	\$ 8,619.22	\$ 8,110.69
	Customer Load Response Program	\$ -	\$ 0.05	-	155,100	\$ 7,898.85	\$ 7,432.82
	Custom Applications Program	\$ -	\$ -	-	155,100	\$ -	\$ -
	Distributed Generation Program	\$ -	\$ 0.14	-	155,100	\$ 21,307.75	\$ 20,050.59
	Municipal LED Traffic Signals	\$ -	\$ -	-	155,100	\$ -	\$ -
	Total	\$ -	\$ 0.39	-	155,100	\$ 61,114.00	\$ 57,508.27
Total						\$ 7,295,420.69	\$ 6,864,990.87

\*\*excludes 5.9% GRT

WEST PENN POWER CO.  
d/b/a Allegheny Power  
EE&C Expenses

Customer Class	Program Name	Commission Approved Total	EE&C Surcharge Billed*	Remainder* thru May 2013	
Residential	Low Income Home Performance & Appliance Program	\$ 5,381,563	\$ (833,225)	\$ 4,548,338	
	Low Income Joint Utility Usage Management Program	\$ 6,362,561	\$ (974,780)	\$ 5,387,781	
	Low Income Room Air Conditioner Replacement Program	\$ 1,792,221	\$ (277,743)	\$ 1,514,478	
	Residential HVAC Efficiency Program	\$ 3,570,672	\$ (570,473)	\$ 3,000,198	
	Residential Energy Star & High Efficiency Appliance Program	\$ 16,557,991	\$ (2,584,877)	\$ 13,973,113	
	CFL Rewards Program	\$ 3,304,607	\$ (530,605)	\$ 2,774,002	
	Residential Home Performance Program	\$ 14,478,886	\$ (2,254,691)	\$ 12,224,195	
	Programmable Controllable Thermostat Program	\$ 1,718,584	\$ (263,112)	\$ 1,455,472	
	Critical Peak Rebate Rate Offering	\$ 361,780	\$ (56,586)	\$ 305,195	
	Residential Eff. Rewards - Pay Ahead Rate Offering	\$ 361,780	\$ (56,586)	\$ 305,195	
Non-Residential	Commercial HVAC Efficiency Program	\$ 2,238,914	\$ (391,583)	\$ 1,847,330	
	Custom Technology Applications Program	\$ 4,201,958	\$ (567,405)	\$ 3,634,553	
	Contracted Demand Response Program	\$ -	\$ -	\$ -	
	Lighting Efficiency Program	\$ 12,464,790	\$ (1,877,929)	\$ 10,586,861	
	Time of Use - Hourly Rate Offerings	\$ 515,174	\$ (85,446)	\$ 429,728	
	Commercial and Industrial Drives Program	\$ 3,182,185	\$ (336,168)	\$ 2,846,017	
	Customer Load Response Program	\$ 2,484,356	\$ (318,671)	\$ 2,165,685	
	Custom Applications Program	\$ 6,280,660	\$ -	\$ 6,280,660	
	Customer Resources for Demand Response	\$ 2,781,693	\$ -	\$ 2,781,693	
	Distributed Generation Program	\$ 623,713	\$ (502,659)	\$ 121,054	
	Municipal / School / Non-Profit CFLs	\$ 1,011,986	\$ (152,464)	\$ 859,521	
	Municipal / School / Non-Profit LED Exit Signs	\$ 1,827,074	\$ (275,265)	\$ 1,551,810	
	Municipal LED Traffic Signals	\$ 1,692,684	\$ (146,100)	\$ 1,546,584	
	Municipal / School / Non-Profit T8s	\$ 1,040,683	\$ (156,788)	\$ 883,895	
	Total		\$ 94,236,514	\$ (13,213,156)	\$ 81,023,358

\*Billed amounts through Feb 2010; forecasted amounts Mar through May 2010

\*\*excludes 5.9% GRT

**Levelized Surcharge Summary**  
**Residential**  
**Tariff No. 39, Schedule 10**

Tariff No. 39, Schedule 10

	<u>\$/ kWh</u>
Surcharge post-tax*	
Low Income Home Performance & Appliance Program	\$ 0.00023
Low Income Joint Utility Usage Management Program	\$ 0.00028
Low Income Room Air Conditioner Replacement Program	\$ 0.00008
Residential HVAC Efficiency Program	\$ 0.00015
Residential Energy Star & High Efficiency Appliance Program	\$ 0.00071
CFL Rewards Program	\$ 0.00014
Residential Home Performance Program	\$ 0.00063
Programmable Controllable Thermostat Program	\$ 0.00007
Critical Peak Rebate Rate Offering	\$ 0.00002
Residential Eff. Rewards - Pay Ahead Rate Offering	<u>\$ 0.00002</u>
 Total Surcharge post-tax*	 \$ 0.00233
 36-month forecast	 <u>kWh</u>
Tariff No. 39, Schedule 10	20,781,879,202
 Forecast average month	 <u>kWh</u>
Tariff No. 39, Schedule 10	934
 Surcharge for average usage	 <u>\$/ month</u>
Tariff No. 39, Schedule 10	\$ 2.17

\*includes 5.9% GRT

**Levelized Surcharge Summary**  
**Non-Residential**  
**Tariff No. 39, Schedule 20**

Tariff No. 39, Schedule 20

Surcharge post-tax\*

	<u>\$ / kWh</u>	<u>\$ / kW-kVA</u>
Commercial HVAC Efficiency Program	\$ 0.00014	\$ -
Custom Technology Applications Program	\$ -	\$ -
Lighting Efficiency Program	\$ 0.00091	\$ -
Time of Use - Hourly Rate Offerings	\$ 0.00003	\$ -
Commercial and Industrial Drives Program	\$ -	\$ -
Customer Load Response Program	\$ -	\$ -
Custom Applications Program	\$ -	\$ -
Customer Resources for Demand Response	\$ -	\$ -
Distributed Generation Program	\$ -	\$ -
Municipal LED Traffic Signals	\$ 0.00021	\$ -

Total Surcharge post-tax\*

\$ 0.00129	\$ -
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36-month forecast

	<u>kWh</u>	<u>kW-kVA</u>
Tariff No. 39, Schedule 20	7,964,181,273	0

Forecast average month

	<u>kWh</u>	<u>kW-kVA</u>
Tariff No. 39, Schedule 20	2,429	0

Surcharge for average usage

	<u>\$ / month</u>
Tariff No. 39, Schedule 20	\$ 3.13

\*includes 5.9% GRT

**Levelized Surcharge Summary**  
**Non-Residential**  
**Tariff No. 39, Schedule 22**

Tariff No. 39, Schedule 22

	\$/ kWh	\$/ kW-kVA
Surcharge post-tax*		
Commercial HVAC Efficiency Program	\$ 0.00014	\$ -
Custom Technology Applications Program	\$ -	\$ -
Lighting Efficiency Program	\$ 0.00091	\$ -
Time of Use - Hourly Rate Offerings	\$ 0.00003	\$ -
Commercial and Industrial Drives Program	\$ -	\$ -
Customer Load Response Program	\$ -	\$ -
Custom Applications Program	\$ -	\$ -
Customer Resources for Demand Response	\$ -	\$ -
Distributed Generation Program	\$ -	\$ -
Municipal LED Traffic Signals	\$ -	\$ -
<b>Total Surcharge post-tax*</b>	<b>\$ 0.00108</b>	<b>\$ -</b>
36-month forecast	kWh	kW-kVA
Tariff No. 39, Schedule 22	131,186,046	0
Forecast average month	kWh	kW-kVA
Tariff No. 39, Schedule 22	2,386	0
Surcharge for average usage	\$/ month	
Tariff No. 39, Schedule 22	\$ 2.59	

\*includes 5.9% GRT

**Levelized Surcharge Summary**  
**Non-Residential**  
**Tariff No. 39, Schedule 30 (small)**

Tariff No. 39, Schedule 30 (small)

Surcharge post-tax*	\$/ kWh	\$/ kW-kVA
Commercial HVAC Efficiency Program	\$ 0.00003	\$ 0.04
Custom Technology Applications Program	\$ 0.00013	\$ 0.07
Lighting Efficiency Program	\$ 0.00057	\$ 0.13
Time of Use - Hourly Rate Offerings	\$ 0.00001	\$ 0.01
Commercial and Industrial Drives Program	\$ 0.00006	\$ 0.02
Customer Load Response Program	\$ 0.00000	\$ 0.03
Custom Applications Program	\$ -	\$ -
Customer Resources for Demand Response	\$ 0.00000	\$ 0.04
Distributed Generation Program	\$ 0.00000	\$ 0.00
Municipal LED Traffic Signals	\$ -	\$ -
<b>Total Surcharge post-tax*</b>	<b>\$ 0.00079</b>	<b>\$ 0.36</b>
<b>36-month forecast</b>	<b>kWh</b>	<b>kW-kVA</b>
Tariff No. 39, Schedule 30 (small)	5,679,026,084	14,451,896
<b>Forecast average month</b>	<b>kWh</b>	<b>kW-kVA</b>
Tariff No. 39, Schedule 30 (small)	74,795	191
<b>Surcharge for average usage</b>	<b>\$/ month</b>	
Tariff No. 39, Schedule 30 (small)	\$ 127.49	

\*includes 5.9% GRT

**Levelized Surcharge Summary**  
**Non-Residential**  
**Tariff No. 39, Schedule 30 (large)**

Tariff No. 39, Schedule 30 (large)

	<u>\$ / kW PLC</u>
Surcharge post-tax*	
Commercial HVAC Efficiency Program	\$ -
Custom Technology Applications Program	\$ 0.15
Lighting Efficiency Program	\$ 0.14
Time of Use - Hourly Rate Offerings	\$ -
Commercial and Industrial Drives Program	\$ 0.06
Customer Load Response Program	\$ 0.04
Custom Applications Program	\$ 0.15
Customer Resources for Demand Response	\$ 0.05
Distributed Generation Program	\$ 0.00
Municipal LED Traffic Signals	<u>\$ -</u>
 Total Surcharge post-tax*	 \$ 0.59
 36-month forecast	 <u>kW PLC</u>
Tariff No. 39, Schedule 30 (large)	14,405,349
 Forecast average month	 <u>kW PLC</u>
Tariff No. 39, Schedule 30 (large)	723
 Surcharge for average usage	 <u>\$ / month</u>
Tariff No. 39, Schedule 30 (large)	\$ 426.32

\*includes 5.9% GRT

**Levelized Surcharge Summary  
Non-Residential  
Tariff No. 39, Schedule 40**

Tariff No. 39, Schedule 40

Surcharge post-tax\*

	<u>\$ / kW PLC</u>
Commercial HVAC Efficiency Program	\$ -
Custom Technology Applications Program	\$ -
Lighting Efficiency Program	\$ -
Time of Use - Hourly Rate Offerings	\$ -
Commercial and Industrial Drives Program	\$ 0.06
Customer Load Response Program	\$ 0.04
Custom Applications Program	\$ 0.15
Customer Resources for Demand Response	\$ 0.05
Distributed Generation Program	\$ 0.00
Municipal LED Traffic Signals	<u>\$ -</u>

Total Surcharge post-tax*	\$ 0.31
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36-month forecast

Tariff No. 39, Schedule 40	<u>kW PLC</u> 18,876,898
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Forecast average month

Tariff No. 39, Schedule 40	<u>kW PLC</u> 4,504
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Surcharge for average usage

Tariff No. 39, Schedule 40	<u>\$ / month</u> \$ 1,379.09
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\*includes 5.9% GRT



**Levelized Surcharge Summary**  
**Non-Residential**  
**Tariff No. 39, Schedule 41**

Tariff No. 39, Schedule 41

Surcharge post-tax\*

	<u>\$ / kW PLC</u>
Commercial HVAC Efficiency Program	\$ -
Custom Technology Applications Program	\$ -
Lighting Efficiency Program	\$ -
Time of Use - Hourly Rate Offerings	\$ -
Commercial and Industrial Drives Program	\$ 0.06
Customer Load Response Program	\$ 0.04
Custom Applications Program	\$ 0.15
Customer Resources for Demand Response	\$ 0.05
Distributed Generation Program	\$ 0.00
Municipal LED Traffic Signals	<u>\$ -</u>

Total Surcharge post-tax\*

\$ 0.31

36-month forecast

Tariff No. 39, Schedule 41

kW PLC

429,902

Forecast average month

Tariff No. 39, Schedule 41

kW PLC

5,971

Surcharge for average usage

Tariff No. 39, Schedule 41

\$ / month

\$ 1,828.28

\*includes 5.9% GRT

**Levelized Surcharge Summary**  
**Non-Residential**  
**Tariff No. 39, Schedule 44**

Tariff No. 39, Schedule 44

Surcharge post-tax\*

	<u>\$ / kW PLC</u>
Commercial HVAC Efficiency Program	\$ -
Custom Technology Applications Program	\$ -
Lighting Efficiency Program	\$ -
Time of Use - Hourly Rate Offerings	\$ -
Commercial and Industrial Drives Program	\$ 0.06
Customer Load Response Program	\$ 0.04
Custom Applications Program	\$ 0.15
Customer Resources for Demand Response	\$ 0.05
Distributed Generation Program	\$ 0.00
Municipal LED Traffic Signals	<u>\$ -</u>

Total Surcharge post-tax\*

\$ 0.31

36-month forecast

Tariff No. 39, Schedule 44

kW PLC

347,406

Forecast average month

Tariff No. 39, Schedule 44

kW PLC

9,650

Surcharge for average usage

Tariff No. 39, Schedule 44

\$ / month

\$ 2,954.76

\*includes 5.9% GRT

**Levelized Surcharge Summary**  
**Non-Residential**  
**Tariff No. 39, Schedule 46**

Tariff No. 39, Schedule 46

Surcharge post-tax\*

	<u>\$ / kW PLC</u>
Commercial HVAC Efficiency Program	\$ -
Custom Technology Applications Program	\$ -
Lighting Efficiency Program	\$ -
Time of Use - Hourly Rate Offerings	\$ -
Commercial and Industrial Drives Program	\$ 0.06
Customer Load Response Program	\$ 0.04
Custom Applications Program	\$ 0.15
Customer Resources for Demand Response	\$ 0.05
Distributed Generation Program	\$ 0.00
Municipal LED Traffic Signals	<u>\$ -</u>

Total Surcharge post-tax*	\$ 0.31
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36-month forecast

Tariff No. 39, Schedule 46	<u>kW PLC</u> 7,385,466
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Forecast average month

Tariff No. 39, Schedule 46	<u>kW PLC</u> 102,576
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Surcharge for average usage

Tariff No. 39, Schedule 46	<u>\$ / month</u> \$ 31,408.07
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\*includes 5.9% GRT

**Levelized Surcharge Summary**  
**Non-Residential**  
**Tariff No. 37**

Tariff No. 37

	<u>\$ / kW PLC</u>
Surcharge post-tax*	
Commercial HVAC Efficiency Program	\$ -
Custom Technology Applications Program	\$ -
Lighting Efficiency Program	\$ 0.14
Time of Use - Hourly Rate Offerings	\$ -
Commercial and Industrial Drives Program	\$ 0.06
Customer Load Response Program	\$ 0.04
Custom Applications Program	\$ 0.15
Customer Resources for Demand Response	\$ 0.05
Distributed Generation Program	\$ 0.00
Municipal LED Traffic Signals	<u>\$ -</u>
 Total Surcharge post-tax*	 \$ 0.44
 36-month forecast	 <u>kW PLC</u>
Tariff No. 37	2,041,878
 Forecast average month	 <u>kW PLC</u>
Tariff No. 37	56,719
 Surcharge for average usage	 <u>\$ / month</u>
Tariff No. 37	\$ 25,121.44

\*includes 5.9% GRT

**Levelized Surcharge Calculation**  
**Residential**  
**Low Income Home Performance & Appliance Program**

Total Program Costs		
Low Income Home Performance & Appliance Program	\$	4,548,338
36-month forecast		kWh
Tariff No. 39, Schedule 10		<u>20,781,879,202</u>
Surcharge		\$ / kWh
Tariff No. 39, Schedule 10 pre-tax	\$	<u>0.00022</u>
Tariff No. 39, Schedule 10 post-tax*	\$	0.00023
Forecast Average kWh / month		
Tariff No. 39, Schedule 10		934
Surcharge for average usage		\$ / month
Tariff No. 39, Schedule 10	\$	<u>0.22</u>

\*includes 5.9% GRT

**Levelized Surcharge Calculation  
Residential  
Low Income Joint Utility Usage Management Program**

Total Program Costs		
Low Income Joint Utility Usage Management Program	\$	5,387,781
36-month forecast		kWh
Tariff No. 39, Schedule 10		<u>20,781,879,202</u>
Surcharge		\$ / kWh
Tariff No. 39, Schedule 10 pre-tax	\$	<u>0.00026</u>
Tariff No. 39, Schedule 10 post-tax*	\$	0.00028
Forecast Average kWh / month		
Tariff No. 39, Schedule 10		934
Surcharge for average usage		\$ / month
Tariff No. 39, Schedule 10	\$	<u>0.26</u>

\*includes 5.9% GRT

**Levelized Surcharge Calculation  
Residential  
Low Income Room Air Conditioner Replacement Program**

Total Program Costs	
Low Income Room Air Conditioner Replacement Program	\$ 1,514,478
36-month forecast	
Tariff No. 39, Schedule 10	<u>kWh</u> 20,781,879,202
Surcharge	
Tariff No. 39, Schedule 10 pre-tax	<u>\$ / kWh</u> \$ 0.00007
Tariff No. 39, Schedule 10 post-tax*	\$ 0.00008
Forecast Average kWh / month	
Tariff No. 39, Schedule 10	934
Surcharge for average usage	
Tariff No. 39, Schedule 10	<u>\$ / month</u> \$ 0.07

\*includes 5.9% GRT

**Levelized Surcharge Calculation**  
**Residential**  
**Residential HVAC Efficiency Program**

Total Program Costs		
Residential HVAC Efficiency Program	\$	3,000,198
36-month forecast		kWh
Tariff No. 39, Schedule 10		<u>20,781,879,202</u>
Surcharge		\$ / kWh
Tariff No. 39, Schedule 10 pre-tax	\$	0.00014
Tariff No. 39, Schedule 10 post-tax*	\$	0.00015
Forecast Average kWh / month		
Tariff No. 39, Schedule 10		934
Surcharge for average usage		\$ / month
Tariff No. 39, Schedule 10	\$	<u>0.14</u>

\*includes 5.9% GRT



**Levelized Surcharge Calculation**  
**Residential**  
**Residential Energy Star & High Efficiency Appliance Program**

Total Program Costs	
Residential Energy Star & High Efficiency Appliance Program	\$ 13,973,113
36-month forecast	
Tariff No. 39, Schedule 10	<u>kWh</u> 20,781,879,202
Surcharge	
	<u>\$ / kWh</u>
Tariff No. 39, Schedule 10 pre-tax	\$ 0.00067
Tariff No. 39, Schedule 10 post-tax*	\$ 0.00071
Forecast Average kWh / month	
Tariff No. 39, Schedule 10	934
Surcharge for average usage	
	<u>\$ / month</u>
Tariff No. 39, Schedule 10	\$ 0.67

\*includes 5.9% GRT

**Levelized Surcharge Calculation**  
**Residential**  
**CFL Rewards Program**

Total Program Costs		
CFL Rewards Program	\$	2,774,002
36-month forecast		kWh
Tariff No. 39, Schedule 10		<u>20,781,879,202</u>
Surcharge		\$ / kWh
Tariff No. 39, Schedule 10 pre-tax	\$	0.00013
Tariff No. 39, Schedule 10 post-tax*	\$	0.00014
Forecast Average kWh / month		
Tariff No. 39, Schedule 10		934
Surcharge for average usage		\$ / month
Tariff No. 39, Schedule 10	\$	<u>0.13</u>

\*includes 5.9% GRT

**Levelized Surcharge Calculation**  
**Residential**  
**Residential Home Performance Program**

Total Program Costs		
Residential Home Performance Program	\$	12,224,195
36-month forecast		kWh
Tariff No. 39, Schedule 10		<u>20,781,879,202</u>
Surcharge		\$ / kWh
Tariff No. 39, Schedule 10 pre-tax	\$	<u>0.00059</u>
Tariff No. 39, Schedule 10 post-tax*	\$	0.00063
Forecast Average kWh / month		
Tariff No. 39, Schedule 10		934
Surcharge for average usage		\$ / month
Tariff No. 39, Schedule 10	\$	<u>0.58</u>

\*includes 5.9% GRT

**Levelized Surcharge Calculation**  
**Residential**  
**Programmable Controllable Thermostat Program**

Total Program Costs		
Programmable Controllable Thermostat Program	\$	1,455,472
36-month forecast		kWh
Tariff No. 39, Schedule 10		<u>20,781,879,202</u>
Surcharge		\$ / kWh
Tariff No. 39, Schedule 10 pre-tax	\$	0.00007
Tariff No. 39, Schedule 10 post-tax*	\$	0.00007
Forecast Average kWh / month		
Tariff No. 39, Schedule 10		934
Surcharge for average usage		\$ / month
Tariff No. 39, Schedule 10	\$	<u>0.07</u>

\*includes 5.9% GRT

**Levelized Surcharge Calculation  
Residential  
Critical Peak Rebate Rate Offering**

Total Program Costs		
Critical Peak Rebate Rate Offering	\$	305,195
36-month forecast		kWh
Tariff No. 39, Schedule 10		<u>20,781,879,202</u>
Surcharge		\$ / kWh
Tariff No. 39, Schedule 10 pre-tax	\$	<u>0.00001</u>
Tariff No. 39, Schedule 10 post-tax*	\$	0.00002
Forecast Average kWh / month		
Tariff No. 39, Schedule 10		934
Surcharge for average usage		\$ / month
Tariff No. 39, Schedule 10	\$	<u>0.01</u>

\*includes 5.9% GRT

**Levelized Surcharge Calculation**  
**Residential**  
**Residential Eff. Rewards - Pay Ahead Rate Offering**

Total Program Costs		
Residential Eff. Rewards - Pay Ahead Rate Offering	\$	305,195
36-month forecast		kWh
Tariff No. 39, Schedule 10		<u>20,781,879,202</u>
Surcharge		\$ / kWh
Tariff No. 39, Schedule 10 pre-tax	\$	<u>0.00001</u>
Tariff No. 39, Schedule 10 post-tax*	\$	0.00002
Forecast Average kWh / month		
Tariff No. 39, Schedule 10		934
Surcharge for average usage		\$ / month
Tariff No. 39, Schedule 10	\$	<u>0.01</u>

\*includes 5.9% GRT

**Levelized Surcharge Calculation**  
**Non-Residential**  
**Commercial HVAC Efficiency Program**

Total Program Costs			
Commercial HVAC Efficiency Program	\$	1,847,330	
36-month forecast		kWh	kW-kVA
Tariff No. 39, Schedule 20		7,964,181,273	0
Tariff No. 39, Schedule 22		131,186,046	0
Tariff No. 39, Schedule 30 (small)		5,679,026,084	14,451,896
Tariff No. 39, Schedule 30 (large)		0	0
Tariff No. 39, Schedule 40		0	0
Tariff No. 39, Schedule 41		0	0
Tariff No. 39, Schedule 44		0	0
Tariff No. 39, Schedule 46		0	0
Tariff No. 37		0	0
Total		13,774,393,403	14,451,896
Surcharge pre-tax		\$ / kWh	\$ / kW-kVA
Tariff No. 39, Schedule 20	\$	0.00013	\$ -
Tariff No. 39, Schedule 22	\$	0.00013	\$ -
Tariff No. 39, Schedule 30 (small)	\$	0.00003	\$ 0.04
Tariff No. 39, Schedule 30 (large)	\$	-	\$ -
Tariff No. 39, Schedule 40	\$	-	\$ -
Tariff No. 39, Schedule 41	\$	-	\$ -
Tariff No. 39, Schedule 44	\$	-	\$ -
Tariff No. 39, Schedule 46	\$	-	\$ -
Tariff No. 37	\$	-	\$ -
Surcharge post-tax*		\$ / kWh	\$ / kW-kVA
Tariff No. 39, Schedule 20	\$	0.00014	\$ -
Tariff No. 39, Schedule 22	\$	0.00014	\$ -
Tariff No. 39, Schedule 30 (small)	\$	0.00003	\$ 0.04
Tariff No. 39, Schedule 30 (large)	\$	-	\$ -
Tariff No. 39, Schedule 40	\$	-	\$ -
Tariff No. 39, Schedule 41	\$	-	\$ -
Tariff No. 39, Schedule 44	\$	-	\$ -
Tariff No. 39, Schedule 46	\$	-	\$ -
Tariff No. 37	\$	-	\$ -
Forecast average month		kWh	kW-kVA
Tariff No. 39, Schedule 20		2,429	0
Tariff No. 39, Schedule 22		2,386	0
Tariff No. 39, Schedule 30 (small)		74,795	191
Tariff No. 39, Schedule 30 (large)		0	0
Tariff No. 39, Schedule 40		0	0
Tariff No. 39, Schedule 41		0	0
Tariff No. 39, Schedule 44		0	0
Tariff No. 39, Schedule 46		0	0
Tariff No. 37		0	0
Surcharge for average usage		\$ / month	
Tariff No. 39, Schedule 20	\$	0.35	
Tariff No. 39, Schedule 22	\$	0.34	
Tariff No. 39, Schedule 30 (small)	\$	10.67	
Tariff No. 39, Schedule 30 (large)	\$	-	
Tariff No. 39, Schedule 40	\$	-	
Tariff No. 39, Schedule 41	\$	-	
Tariff No. 39, Schedule 44	\$	-	
Tariff No. 39, Schedule 46	\$	-	
Tariff No. 37	\$	-	

\*includes 5.9% GRT

**Levelized Surcharge Calculation  
Non-Residential  
Lighting Efficiency Program**

Total Program Costs			
Lighting Efficiency Program	\$	13,882,086	
36-month forecast			
		kWh	kW-kVA
Tariff No. 39, Schedule 20		7,964,181,273	0
Tariff No. 39, Schedule 22		131,186,046	0
Tariff No. 39, Schedule 30 (small)		5,679,026,084	14,451,896
Tariff No. 39, Schedule 30 (large)		7,105,943,051	17,035,775
Tariff No. 39, Schedule 40		0	0
Tariff No. 39, Schedule 41		0	0
Tariff No. 39, Schedule 44		0	0
Tariff No. 39, Schedule 46		0	0
Tariff No. 37		824,564,000	1,458,855
			kW PLC
			0
			0
			14,405,349
			0
			0
			0
			0
			2,041,878
Total		21,704,900,454	32,946,526
			16,447,227
Surcharge pre-tax			
		\$ / kWh	\$ / kW-kVA
Tariff No. 39, Schedule 20	\$	0.00085	-
Tariff No. 39, Schedule 22	\$	0.00085	-
Tariff No. 39, Schedule 30 (small)	\$	0.00053	0.13
Tariff No. 39, Schedule 30 (large)			\$ 0.13
Tariff No. 39, Schedule 40			\$ -
Tariff No. 39, Schedule 41			\$ -
Tariff No. 39, Schedule 44			\$ -
Tariff No. 39, Schedule 46			\$ -
Tariff No. 37			\$ 0.13
Surcharge post-tax*			
		\$ / kWh	\$ / kW-kVA
Tariff No. 39, Schedule 20	\$	0.00091	-
Tariff No. 39, Schedule 22	\$	0.00091	-
Tariff No. 39, Schedule 30 (small)	\$	0.00057	0.13
Tariff No. 39, Schedule 30 (large)			\$ 0.14
Tariff No. 39, Schedule 40			\$ -
Tariff No. 39, Schedule 41			\$ -
Tariff No. 39, Schedule 44			\$ -
Tariff No. 39, Schedule 46			\$ -
Tariff No. 37			\$ 0.14
Forecast average month			
		kWh	kW-kVA
Tariff No. 39, Schedule 20		2,429	0
Tariff No. 39, Schedule 22		2,386	0
Tariff No. 39, Schedule 30 (small)		74,795	191
Tariff No. 39, Schedule 30 (large)		356,634	855
Tariff No. 39, Schedule 40		0	0
Tariff No. 39, Schedule 41		0	0
Tariff No. 39, Schedule 44		0	0
Tariff No. 39, Schedule 46		0	0
Tariff No. 37		22,904,555	40,524
			kW PLC
			0
			0
			0
			723
			0
			0
			0
			0
			56,719
Surcharge for average usage			
		\$ / month	
Tariff No. 39, Schedule 20	\$	2.20	
Tariff No. 39, Schedule 22	\$	2.17	
Tariff No. 39, Schedule 30 (small)	\$	67.94	
Tariff No. 39, Schedule 30 (large)	\$	98.85	
Tariff No. 39, Schedule 40	\$	-	
Tariff No. 39, Schedule 41	\$	-	
Tariff No. 39, Schedule 44	\$	-	
Tariff No. 39, Schedule 46	\$	-	
Tariff No. 37	\$	7,754.47	

\*includes 5.9% GRT



**Levelized Surcharge Calculation**  
**Non-Residential**  
**Municipal LED Traffic Signals**

Total Program Costs			
Municipal LED Traffic Signals	\$	1,546,584	
36-month forecast		kWh	kW-kVA
Tariff No. 39, Schedule 20		7,964,181,273	0
Tariff No. 39, Schedule 22		0	0
Tariff No. 39, Schedule 30 (small)		0	0
Tariff No. 39, Schedule 30 (large)		0	0
Tariff No. 39, Schedule 40		0	0
Tariff No. 39, Schedule 41		0	0
Tariff No. 39, Schedule 44		0	0
Tariff No. 39, Schedule 46		0	0
Tariff No. 37		0	0
Total		7,964,181,273	0
Surcharge pre-tax		\$/ kWh	\$/ kW-kVA
Tariff No. 39, Schedule 20	\$	0.00019	-
Tariff No. 39, Schedule 22	\$	-	-
Tariff No. 39, Schedule 30 (small)	\$	-	-
Tariff No. 39, Schedule 30 (large)	\$	-	-
Tariff No. 39, Schedule 40	\$	-	-
Tariff No. 39, Schedule 41	\$	-	-
Tariff No. 39, Schedule 44	\$	-	-
Tariff No. 39, Schedule 46	\$	-	-
Tariff No. 37	\$	-	-
Surcharge post-tax*		\$/ kWh	\$/ kW-kVA
Tariff No. 39, Schedule 20	\$	0.00021	-
Tariff No. 39, Schedule 22	\$	-	-
Tariff No. 39, Schedule 30 (small)	\$	-	-
Tariff No. 39, Schedule 30 (large)	\$	-	-
Tariff No. 39, Schedule 40	\$	-	-
Tariff No. 39, Schedule 41	\$	-	-
Tariff No. 39, Schedule 44	\$	-	-
Tariff No. 39, Schedule 46	\$	-	-
Tariff No. 37	\$	-	-
Forecast average month		kWh	kW-kVA
Tariff No. 39, Schedule 20		2,429	0
Tariff No. 39, Schedule 22		0	0
Tariff No. 39, Schedule 30 (small)		0	0
Tariff No. 39, Schedule 30 (large)		0	0
Tariff No. 39, Schedule 40		0	0
Tariff No. 39, Schedule 41		0	0
Tariff No. 39, Schedule 44		0	0
Tariff No. 39, Schedule 46		0	0
Tariff No. 37		0	0
Surcharge for average usage		\$/ month	
Tariff No. 39, Schedule 20	\$	0.50	
Tariff No. 39, Schedule 22	\$	-	
Tariff No. 39, Schedule 30 (small)	\$	-	
Tariff No. 39, Schedule 30 (large)	\$	-	
Tariff No. 39, Schedule 40	\$	-	
Tariff No. 39, Schedule 41	\$	-	
Tariff No. 39, Schedule 44	\$	-	
Tariff No. 39, Schedule 46	\$	-	
Tariff No. 37	\$	-	

\*includes 5.9% GRT

**Levelized Surcharge Calculation  
Non-Residential  
Custom Technology Applications Program**

Total Program Costs			
Custom Technology Applications Program	\$	3,634,553	
36-month forecast			
	kWh	kW-kVA	kW PLC
Tariff No. 39, Schedule 20	0	0	0
Tariff No. 39, Schedule 22	0	0	0
Tariff No. 39, Schedule 30 (small)	5,679,026,084	14,451,896	0
Tariff No. 39, Schedule 30 (large)	7,105,943,051	17,035,775	14,405,349
Tariff No. 39, Schedule 40	0	0	0
Tariff No. 39, Schedule 41	0	0	0
Tariff No. 39, Schedule 44	0	0	0
Tariff No. 39, Schedule 46	0	0	0
Tariff No. 37	0	0	0
<b>Total</b>	<b>12,784,969,135</b>	<b>31,487,671</b>	<b>14,405,349</b>
Surcharge pre-tax			
	\$ / kWh	\$ / kW-kVA	\$ / kW PLC
Tariff No. 39, Schedule 20	\$ -	\$ -	\$ -
Tariff No. 39, Schedule 22	\$ -	\$ -	\$ -
Tariff No. 39, Schedule 30 (small)	\$ 0.00012	\$ 0.07	\$ -
Tariff No. 39, Schedule 30 (large)			\$ 0.14
Tariff No. 39, Schedule 40			\$ -
Tariff No. 39, Schedule 41			\$ -
Tariff No. 39, Schedule 44			\$ -
Tariff No. 39, Schedule 46			\$ -
Tariff No. 37			\$ -
Surcharge post-tax*			
	\$ / kWh	\$ / kW-kVA	\$ / kW PLC
Tariff No. 39, Schedule 20	\$ -	\$ -	\$ -
Tariff No. 39, Schedule 22	\$ -	\$ -	\$ -
Tariff No. 39, Schedule 30 (small)	\$ 0.00013	\$ 0.07	\$ -
Tariff No. 39, Schedule 30 (large)			\$ 0.15
Tariff No. 39, Schedule 40			\$ -
Tariff No. 39, Schedule 41			\$ -
Tariff No. 39, Schedule 44			\$ -
Tariff No. 39, Schedule 46			\$ -
Tariff No. 37			\$ -
Forecast average month			
	kWh	kW-kVA	kW PLC
Tariff No. 39, Schedule 20	0	0	0
Tariff No. 39, Schedule 22	0	0	0
Tariff No. 39, Schedule 30 (small)	74,795	191	0
Tariff No. 39, Schedule 30 (large)	356,634	855	723
Tariff No. 39, Schedule 40	0	0	0
Tariff No. 39, Schedule 41	0	0	0
Tariff No. 39, Schedule 44	0	0	0
Tariff No. 39, Schedule 46	0	0	0
Tariff No. 37	0	0	0
Surcharge for average usage			
	\$ / month		
Tariff No. 39, Schedule 20	\$ -		
Tariff No. 39, Schedule 22	\$ -		
Tariff No. 39, Schedule 30 (small)	\$ 23.05		
Tariff No. 39, Schedule 30 (large)	\$ 106.10		
Tariff No. 39, Schedule 40	\$ -		
Tariff No. 39, Schedule 41	\$ -		
Tariff No. 39, Schedule 44	\$ -		
Tariff No. 39, Schedule 46	\$ -		
Tariff No. 37	\$ -		

\*includes 5.9% GRT

**Levelized Surcharge Calculation  
Non-Residential  
Commercial and Industrial Drives Program**

Total Program Costs			
Commercial and Industrial Drives Program	\$	2,846,017	
36-month forecast		kWh	kW-kVA
			kW PLC
Tariff No. 39, Schedule 20		0	0
Tariff No. 39, Schedule 22		0	0
Tariff No. 39, Schedule 30 (small)		5,679,026,084	14,451,896
Tariff No. 39, Schedule 30 (large)		7,105,943,051	17,035,775
Tariff No. 39, Schedule 40		10,685,176,791	21,955,680
Tariff No. 39, Schedule 41		213,976,663	599,496
Tariff No. 39, Schedule 44		194,839,673	319,001
Tariff No. 39, Schedule 46		4,914,067,417	11,223,703
Tariff No. 37		824,564,000	1,458,855
Total		29,617,593,679	67,044,406
			43,486,899
Surcharge pre-tax		\$ / kWh	\$ / kW-kVA
			\$ / kW PLC
Tariff No. 39, Schedule 20	\$	-	-
Tariff No. 39, Schedule 22	\$	-	-
Tariff No. 39, Schedule 30 (small)	\$	0.00006	0.02
Tariff No. 39, Schedule 30 (large)			\$ 0.05
Tariff No. 39, Schedule 40			\$ 0.05
Tariff No. 39, Schedule 41			\$ 0.05
Tariff No. 39, Schedule 44			\$ 0.05
Tariff No. 39, Schedule 46			\$ 0.05
Tariff No. 37			\$ 0.05
Surcharge post-tax*		\$ / kWh	\$ / kW-kVA
			\$ / kW PLC
Tariff No. 39, Schedule 20	\$	-	-
Tariff No. 39, Schedule 22	\$	-	-
Tariff No. 39, Schedule 30 (small)	\$	0.00006	0.02
Tariff No. 39, Schedule 30 (large)			\$ 0.06
Tariff No. 39, Schedule 40			\$ 0.06
Tariff No. 39, Schedule 41			\$ 0.06
Tariff No. 39, Schedule 44			\$ 0.06
Tariff No. 39, Schedule 46			\$ 0.06
Tariff No. 37			\$ 0.06
Forecast average month		kWh	kW-kVA
			kW PLC
Tariff No. 39, Schedule 20		0	0
Tariff No. 39, Schedule 22		0	0
Tariff No. 39, Schedule 30 (small)		74,795	191
Tariff No. 39, Schedule 30 (large)		356,634	855
Tariff No. 39, Schedule 40		2,549,363	5,238
Tariff No. 39, Schedule 41		2,971,898	8,326
Tariff No. 39, Schedule 44		5,412,213	8,861
Tariff No. 39, Schedule 46		68,250,936	155,885
Tariff No. 37		22,904,555	40,524
			56,719
Surcharge for average usage		\$ / month	
Tariff No. 39, Schedule 20	\$	-	
Tariff No. 39, Schedule 22	\$	-	
Tariff No. 39, Schedule 30 (small)	\$	8.04	
Tariff No. 39, Schedule 30 (large)	\$	40.15	
Tariff No. 39, Schedule 40	\$	250.10	
Tariff No. 39, Schedule 41	\$	331.56	
Tariff No. 39, Schedule 44	\$	535.85	
Tariff No. 39, Schedule 46	\$	5,695.93	
Tariff No. 37	\$	3,149.54	

\*includes 5.9% GRT

**Levelized Surcharge Calculation  
Non-Residential  
Custom Applications Program**

Total Program Costs			
Custom Applications Program	\$	6,280,660	
36-month forecast		kWh	kW-kVA
Tariff No. 39, Schedule 20		0	0
Tariff No. 39, Schedule 22		0	0
Tariff No. 39, Schedule 30 (small)		0	0
Tariff No. 39, Schedule 30 (large)		7,105,943,051	17,035,775
Tariff No. 39, Schedule 40		10,685,176,791	21,955,680
Tariff No. 39, Schedule 41		213,976,663	599,496
Tariff No. 39, Schedule 44		194,839,673	319,001
Tariff No. 39, Schedule 46		4,914,067,417	11,223,703
Tariff No. 37		824,564,000	1,458,855
Total		23,938,567,595	52,592,510
Surcharge pre-tax		\$ / kWh	\$ / kW-kVA
Tariff No. 39, Schedule 20	\$	-	-
Tariff No. 39, Schedule 22	\$	-	-
Tariff No. 39, Schedule 30 (small)	\$	-	-
Tariff No. 39, Schedule 30 (large)			\$ 0.14
Tariff No. 39, Schedule 40			\$ 0.14
Tariff No. 39, Schedule 41			\$ 0.14
Tariff No. 39, Schedule 44			\$ 0.14
Tariff No. 39, Schedule 46			\$ 0.14
Tariff No. 37			\$ 0.14
Surcharge post-tax*		\$ / kWh	\$ / kW-kVA
Tariff No. 39, Schedule 20	\$	-	-
Tariff No. 39, Schedule 22	\$	-	-
Tariff No. 39, Schedule 30 (small)	\$	-	-
Tariff No. 39, Schedule 30 (large)			\$ 0.15
Tariff No. 39, Schedule 40			\$ 0.15
Tariff No. 39, Schedule 41			\$ 0.15
Tariff No. 39, Schedule 44			\$ 0.15
Tariff No. 39, Schedule 46			\$ 0.15
Tariff No. 37			\$ 0.15
Forecast average month		kWh	kW-kVA
Tariff No. 39, Schedule 20		0	0
Tariff No. 39, Schedule 22		0	0
Tariff No. 39, Schedule 30 (small)		0	0
Tariff No. 39, Schedule 30 (large)		356,634	855
Tariff No. 39, Schedule 40		2,549,363	5,238
Tariff No. 39, Schedule 41		2,971,898	8,326
Tariff No. 39, Schedule 44		5,412,213	8,861
Tariff No. 39, Schedule 46		68,250,936	155,885
Tariff No. 37		22,904,555	40,524
Surcharge for average usage		\$ / month	
Tariff No. 39, Schedule 20	\$	-	
Tariff No. 39, Schedule 22	\$	-	
Tariff No. 39, Schedule 30 (small)	\$	-	
Tariff No. 39, Schedule 30 (large)	\$	110.97	
Tariff No. 39, Schedule 40	\$	691.28	
Tariff No. 39, Schedule 41	\$	916.44	
Tariff No. 39, Schedule 44	\$	1,481.10	
Tariff No. 39, Schedule 46	\$	15,743.56	
Tariff No. 37	\$	8,705.34	

\*includes 5.9% GRT

**Levelized Surcharge Calculation  
Non-Residential  
Customer Load Response Program**

Total Program Costs			
Customer Load Response Program	\$	2,165,685	
36-month forecast		kWh	kW-kVA
			kW PLC
Tariff No. 39, Schedule 20		0	0
Tariff No. 39, Schedule 22		0	0
Tariff No. 39, Schedule 30 (small)		5,679,026,084	14,451,896
Tariff No. 39, Schedule 30 (large)		7,105,943,051	17,035,775
Tariff No. 39, Schedule 40		10,685,176,791	21,955,680
Tariff No. 39, Schedule 41		213,976,663	599,496
Tariff No. 39, Schedule 44		194,839,673	319,001
Tariff No. 39, Schedule 46		4,914,067,417	11,223,703
Tariff No. 37		824,564,000	1,458,855
Total		29,617,593,679	67,044,406
Surcharge pre-tax		\$ / kWh	\$ / kW-kVA
			\$ / kW PLC
Tariff No. 39, Schedule 20	\$	-	-
Tariff No. 39, Schedule 22	\$	-	-
Tariff No. 39, Schedule 30 (small)	\$	0.00000	0.03
Tariff No. 39, Schedule 30 (large)			\$ 0.04
Tariff No. 39, Schedule 40			\$ 0.04
Tariff No. 39, Schedule 41			\$ 0.04
Tariff No. 39, Schedule 44			\$ 0.04
Tariff No. 39, Schedule 46			\$ 0.04
Tariff No. 37			\$ 0.04
Surcharge post-tax*		\$ / kWh	\$ / kW-kVA
			\$ / kW PLC
Tariff No. 39, Schedule 20	\$	-	-
Tariff No. 39, Schedule 22	\$	-	-
Tariff No. 39, Schedule 30 (small)	\$	0.00000	0.03
Tariff No. 39, Schedule 30 (large)			\$ 0.04
Tariff No. 39, Schedule 40			\$ 0.04
Tariff No. 39, Schedule 41			\$ 0.04
Tariff No. 39, Schedule 44			\$ 0.04
Tariff No. 39, Schedule 46			\$ 0.04
Tariff No. 37			\$ 0.04
Forecast average month		kWh	kW-kVA
			kW PLC
Tariff No. 39, Schedule 20		0	0
Tariff No. 39, Schedule 22		0	0
Tariff No. 39, Schedule 30 (small)		74,795	191
Tariff No. 39, Schedule 30 (large)		356,634	855
Tariff No. 39, Schedule 40		2,549,363	5,238
Tariff No. 39, Schedule 41		2,971,898	8,326
Tariff No. 39, Schedule 44		5,412,213	8,861
Tariff No. 39, Schedule 46		68,250,936	155,885
Tariff No. 37		22,904,555	40,524
Surcharge for average usage		\$ / month	
Tariff No. 39, Schedule 20	\$	-	
Tariff No. 39, Schedule 22	\$	-	
Tariff No. 39, Schedule 30 (small)	\$	6.54	
Tariff No. 39, Schedule 30 (large)	\$	30.02	
Tariff No. 39, Schedule 40	\$	187.03	
Tariff No. 39, Schedule 41	\$	247.95	
Tariff No. 39, Schedule 44	\$	400.72	
Tariff No. 39, Schedule 46	\$	4,259.46	
Tariff No. 37	\$	2,355.25	

\*includes 5.9% GRT

**Levelized Surcharge Calculation  
Non-Residential  
Customer Resources for Demand Response**

Total Program Costs			
Customer Resources for Demand Response	\$	2,781,693	
36-month forecast		kWh	kW-kVA
			kW PLC
Tariff No. 39, Schedule 20		0	0
Tariff No. 39, Schedule 22		0	0
Tariff No. 39, Schedule 30 (small)		5,679,026,084	14,451,896
Tariff No. 39, Schedule 30 (large)		7,105,943,051	17,035,775
Tariff No. 39, Schedule 40		10,685,176,791	21,955,680
Tariff No. 39, Schedule 41		213,976,663	599,496
Tariff No. 39, Schedule 44		194,839,673	319,001
Tariff No. 39, Schedule 46		4,914,067,417	11,223,703
Tariff No. 37		824,564,000	1,458,855
Total		29,617,593,679	67,044,406
			43,486,899
Surcharge pre-tax		\$ / kWh	\$ / kW-kVA
			\$ / kW PLC
Tariff No. 39, Schedule 20	\$	-	-
Tariff No. 39, Schedule 22	\$	-	-
Tariff No. 39, Schedule 30 (small)	\$	0.00000	0.04
Tariff No. 39, Schedule 30 (large)			\$ 0.05
Tariff No. 39, Schedule 40			\$ 0.05
Tariff No. 39, Schedule 41			\$ 0.05
Tariff No. 39, Schedule 44			\$ 0.05
Tariff No. 39, Schedule 46			\$ 0.05
Tariff No. 37			\$ 0.05
Surcharge post-tax*		\$ / kWh	\$ / kW-kVA
			\$ / kW PLC
Tariff No. 39, Schedule 20	\$	-	-
Tariff No. 39, Schedule 22	\$	-	-
Tariff No. 39, Schedule 30 (small)	\$	0.00000	0.04
Tariff No. 39, Schedule 30 (large)			\$ 0.05
Tariff No. 39, Schedule 40			\$ 0.05
Tariff No. 39, Schedule 41			\$ 0.05
Tariff No. 39, Schedule 44			\$ 0.05
Tariff No. 39, Schedule 46			\$ 0.05
Tariff No. 37			\$ 0.05
Forecast average month		kWh	kW-kVA
			kW PLC
Tariff No. 39, Schedule 20		0	0
Tariff No. 39, Schedule 22		0	0
Tariff No. 39, Schedule 30 (small)		74,795	191
Tariff No. 39, Schedule 30 (large)		356,634	855
Tariff No. 39, Schedule 40		2,549,363	5,238
Tariff No. 39, Schedule 41		2,971,898	8,326
Tariff No. 39, Schedule 44		5,412,213	8,861
Tariff No. 39, Schedule 46		68,250,936	155,885
Tariff No. 37		22,904,555	40,524
			56,719
Surcharge for average usage		\$ / month	
Tariff No. 39, Schedule 20	\$	-	
Tariff No. 39, Schedule 22	\$	-	
Tariff No. 39, Schedule 30 (small)	\$	8.40	
Tariff No. 39, Schedule 30 (large)	\$	38.56	
Tariff No. 39, Schedule 40	\$	240.23	
Tariff No. 39, Schedule 41	\$	318.47	
Tariff No. 39, Schedule 44	\$	514.70	
Tariff No. 39, Schedule 46	\$	5,471.02	
Tariff No. 37	\$	3,025.18	

\*includes 5.9% GRT

**Levelized Surcharge Calculation  
Non-Residential  
Distributed Generation Program**

Total Program Costs			
Distributed Generation Program	\$	121,054	
36-month forecast		kWh	kW-kVA
			kW PLC
Tariff No. 39, Schedule 20		0	0
Tariff No. 39, Schedule 22		0	0
Tariff No. 39, Schedule 30 (small)		5,679,026,084	14,451,896
Tariff No. 39, Schedule 30 (large)		7,105,943,051	17,035,775
Tariff No. 39, Schedule 40		10,685,176,791	21,955,680
Tariff No. 39, Schedule 41		213,976,663	599,496
Tariff No. 39, Schedule 44		194,839,673	319,001
Tariff No. 39, Schedule 46		4,914,067,417	11,223,703
Tariff No. 37		824,564,000	1,458,855
Total		29,617,593,679	67,044,406
Surcharge pre-tax		\$ / kWh	\$ / kW-kVA
			\$ / kW PLC
Tariff No. 39, Schedule 20	\$	-	-
Tariff No. 39, Schedule 22	\$	-	-
Tariff No. 39, Schedule 30 (small)	\$	0.00000	0.00
Tariff No. 39, Schedule 30 (large)			\$ 0.00
Tariff No. 39, Schedule 40			\$ 0.00
Tariff No. 39, Schedule 41			\$ 0.00
Tariff No. 39, Schedule 44			\$ 0.00
Tariff No. 39, Schedule 46			\$ 0.00
Tariff No. 37			\$ 0.00
Surcharge post-tax*		\$ / kWh	\$ / kW-kVA
			\$ / kW PLC
Tariff No. 39, Schedule 20	\$	-	-
Tariff No. 39, Schedule 22	\$	-	-
Tariff No. 39, Schedule 30 (small)	\$	0.00000	0.00
Tariff No. 39, Schedule 30 (large)			\$ 0.00
Tariff No. 39, Schedule 40			\$ 0.00
Tariff No. 39, Schedule 41			\$ 0.00
Tariff No. 39, Schedule 44			\$ 0.00
Tariff No. 39, Schedule 46			\$ 0.00
Tariff No. 37			\$ 0.00
Forecast average month		kWh	kW-kVA
			kW PLC
Tariff No. 39, Schedule 20		0	0
Tariff No. 39, Schedule 22		0	0
Tariff No. 39, Schedule 30 (small)		74,795	191
Tariff No. 39, Schedule 30 (large)		356,634	855
Tariff No. 39, Schedule 40		2,549,363	5,238
Tariff No. 39, Schedule 41		2,971,898	8,326
Tariff No. 39, Schedule 44		5,412,213	8,861
Tariff No. 39, Schedule 46		68,250,936	155,885
Tariff No. 37		22,904,555	40,524
Surcharge for average usage		\$ / month	
Tariff No. 39, Schedule 20	\$	-	
Tariff No. 39, Schedule 22	\$	-	
Tariff No. 39, Schedule 30 (small)	\$	0.37	
Tariff No. 39, Schedule 30 (large)	\$	1.68	
Tariff No. 39, Schedule 40	\$	10.45	
Tariff No. 39, Schedule 41	\$	13.86	
Tariff No. 39, Schedule 44	\$	22.40	
Tariff No. 39, Schedule 46	\$	238.09	
Tariff No. 37	\$	131.65	

\*includes 5.9% GRT

**Levelized Surcharge Calculation**  
**Non-Residential**  
**Time of Use - Hourly Rate Offerings**

Total Program Costs		
Time of Use - Hourly Rate Offerings	\$	429,728
36-month forecast		
	<u>kWh</u>	<u>kW-kVA</u>
Tariff No. 39, Schedule 20	7,964,181,273	0
Tariff No. 39, Schedule 22	131,186,046	0
Tariff No. 39, Schedule 30 (small)	5,679,026,084	14,451,896
Tariff No. 39, Schedule 30 (large)	0	0
Tariff No. 39, Schedule 40	0	0
Tariff No. 39, Schedule 41	0	0
Tariff No. 39, Schedule 44	0	0
Tariff No. 39, Schedule 46	0	0
Tariff No. 37	0	0
Total	13,774,393,403	14,451,896
Surcharge pre-tax		
	<u>\$ / kWh</u>	<u>\$ / kW-kVA</u>
Tariff No. 39, Schedule 20	\$ 0.00003	\$ -
Tariff No. 39, Schedule 22	\$ 0.00003	\$ -
Tariff No. 39, Schedule 30 (small)	\$ 0.00001	\$ 0.01
Tariff No. 39, Schedule 30 (large)	\$ -	\$ -
Tariff No. 39, Schedule 40	\$ -	\$ -
Tariff No. 39, Schedule 41	\$ -	\$ -
Tariff No. 39, Schedule 44	\$ -	\$ -
Tariff No. 39, Schedule 46	\$ -	\$ -
Tariff No. 37	\$ -	\$ -
Surcharge post-tax*		
	<u>\$ / kWh</u>	<u>\$ / kW-kVA</u>
Tariff No. 39, Schedule 20	\$ 0.00003	\$ -
Tariff No. 39, Schedule 22	\$ 0.00003	\$ -
Tariff No. 39, Schedule 30 (small)	\$ 0.00001	\$ 0.00997
Tariff No. 39, Schedule 30 (large)	\$ -	\$ -
Tariff No. 39, Schedule 40	\$ -	\$ -
Tariff No. 39, Schedule 41	\$ -	\$ -
Tariff No. 39, Schedule 44	\$ -	\$ -
Tariff No. 39, Schedule 46	\$ -	\$ -
Tariff No. 37	\$ -	\$ -
Forecast average month		
	<u>kWh</u>	<u>kW-kVA</u>
Tariff No. 39, Schedule 20	2,429	0
Tariff No. 39, Schedule 22	2,386	0
Tariff No. 39, Schedule 30 (small)	74,795	191
Tariff No. 39, Schedule 30 (large)	0	0
Tariff No. 39, Schedule 40	0	0
Tariff No. 39, Schedule 41	0	0
Tariff No. 39, Schedule 44	0	0
Tariff No. 39, Schedule 46	0	0
Tariff No. 37	0	0
Surcharge for average usage		
	<u>\$ / month</u>	
Tariff No. 39, Schedule 20	\$ 0.08	
Tariff No. 39, Schedule 22	\$ 0.08	
Tariff No. 39, Schedule 30 (small)	\$ 2.48	
Tariff No. 39, Schedule 30 (large)	\$ -	
Tariff No. 39, Schedule 40	\$ -	
Tariff No. 39, Schedule 41	\$ -	
Tariff No. 39, Schedule 44	\$ -	
Tariff No. 39, Schedule 46	\$ -	
Tariff No. 37	\$ -	

\*includes 5.9% GRT



LF10Q1 Forecast Summary

	kWh			Average kWh per customer		
	Jun '10-May '11	Jun '11-May '12	Jun '12-May '13	Jun '10-May '11	Jun '11-May '12	Jun '12-May '13
	Tariff No. 39, Schedule 10	7,034,979,253	6,916,913,344	6,829,986,605	951	933
Tariff No. 39, Schedule 20	2,608,291,540	2,640,137,493	2,715,752,240	2,401	2,415	2,470
Tariff No. 39, Schedule 22	42,986,392	43,456,441	44,743,213	2,360	2,371	2,427
Tariff No. 39, Schedule 30 (small)	1,855,966,200	1,884,668,994	1,938,390,890	73,763	74,486	76,135
Tariff No. 39, Schedule 30 (large)	2,322,297,860	2,358,212,543	2,425,432,648	351,714	355,163	363,025
Tariff No. 39, Schedule 40	3,480,542,869	3,551,436,542	3,653,197,380	2,505,790	2,544,009	2,598,291
Tariff No. 39, Schedule 41	69,682,356	71,142,154	73,152,153	2,903,432	2,964,256	3,048,006
Tariff No. 39, Schedule 44	63,448,738	64,777,828	66,613,107	5,287,395	5,398,152	5,551,092
Tariff No. 39, Schedule 46	1,601,102,336	1,633,941,692	1,679,023,389	66,712,597	68,080,904	69,959,308
Tariff No. 37	266,602,000	273,502,000	284,460,000	22,216,833	22,791,833	23,705,000

	kW / kVA			Average kW / kVA per customer			PLC			Average PLC per customer		
	Jun '10-May '11	Jun '11-May '12	Jun '12-May '13	Jun '10-May '11	Jun '11-May '12	Jun '12-May '13	Jun '10-May '11	Jun '11-May '12	Jun '12-May '13	Jun '10-May '11	Jun '11-May '12	Jun '12-May '13
	Tariff No. 39, Schedule 10	0	0	0	0	0	0					
Tariff No. 39, Schedule 20	0	0	0	0	0	0						
Tariff No. 39, Schedule 22	0	0	0	0	0	0						
Tariff No. 39, Schedule 30 (small)	4,722,218	4,796,523	4,933,155	188	190	194						
Tariff No. 39, Schedule 30 (large)	5,566,512	5,654,102	5,815,161	843	852	870	4,774,279	4,800,581	4,830,489	723	723	723
Tariff No. 39, Schedule 40	7,151,375	7,297,563	7,506,742	5,149	5,227	5,339	6,256,690	6,287,584	6,332,624	4,504	4,504	4,504
Tariff No. 39, Schedule 41	195,215	199,323	204,958	8,134	8,305	8,540	143,294	143,304	143,304	5,971	5,971	5,971
Tariff No. 39, Schedule 44	103,876	106,063	109,062	8,656	8,839	9,089	115,806	115,800	115,800	9,650	9,650	9,650
Tariff No. 39, Schedule 46	3,659,089	3,732,178	3,832,436	152,462	155,507	159,685	2,461,818	2,461,824	2,461,824	102,576	102,576	102,576
Tariff No. 37	471,689	483,900	503,266	39,307	40,325	41,939	680,622	680,628	680,628	56,719	56,719	56,719

	Customers x 12			Average customers per month			PLC customers x 12			Average PLC customers per month		
	Jun '10-May '11	Jun '11-May '12	Jun '12-May '13	Jun '10-May '11	Jun '11-May '12	Jun '12-May '13	Jun '10-May '11	Jun '11-May '12	Jun '12-May '13	Jun '10-May '11	Jun '11-May '12	Jun '12-May '13
	Tariff No. 39, Schedule 10	7,396,152	7,412,992	7,437,138	616,346	617,749	619,762					
Tariff No. 39, Schedule 20	1,086,449	1,093,052	1,099,675	90,537	91,088	91,640						
Tariff No. 39, Schedule 22	18,211	18,326	18,434	1,518	1,527	1,536						
Tariff No. 39, Schedule 30 (small)	25,161	25,302	25,460	2,097	2,109	2,122						
Tariff No. 39, Schedule 30 (large)	6,603	6,640	6,681	550	553	557	6,603	6,640	6,681	550	553	557
Tariff No. 39, Schedule 40	1,389	1,396	1,406	116	116	117	1,389	1,396	1,406	116	116	117
Tariff No. 39, Schedule 41	24	24	24	2	2	2	24	24	24	2	2	2
Tariff No. 39, Schedule 44	12	12	12	1	1	1	12	12	12	1	1	1
Tariff No. 39, Schedule 46	24	24	24	2	2	2	24	24	24	2	2	2
Tariff No. 37	12	12	12	1	1	1	12	12	12	1	1	1

WEST PENN POWER COMPANY

Supplement No. \_\_\_\_ to  
Electric-Pa. P. U. C. No. 39  
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Canceling \_\_\_\_ Page No. 5-9

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**ENERGY EFFICIENCY AND CONSERVATION (“EE&C”) SURCHARGE**

In addition to the charges provided in this Tariff and in accordance with 66 Pa. C.S.A. §2806.1, there shall be a surcharge as set forth below to recover the costs associated with Company-sponsored programs for energy efficiency and conservation programs as approved by the Commission. This surcharge is applied to designated Rate Schedules to recover costs allocated to that Rate Schedule. This surcharge will be applied each month until changed by the Commission. The resulting surcharge is in addition to any minimum charge set out in the Rate Schedule and is added to the Customer's bill before any tax surcharge is levied against the Customer's total bill. Amounts billed hereunder shall be subject to late payment charges.

**CALCULATION OF SURCHARGE**

The EE&C Surcharge is calculated as a levelized surcharge through May 2013. The surcharge is calculated by separating the Program Costs allocated to each Rate Schedule into an energy-related portion and a demand-related portion, and dividing by forecasted distribution energy and distribution demand sales, respectively, for the same Rate Schedule. The calculation includes an Annual Reconciliation Factor adjustment and an adjustment for gross receipts tax. The Annual Reconciliation Factor adjustment will be filed by March 31 to become effective the forthcoming June 1. Upon determination that the surcharge, if left unchanged, would result in a material over/under-collection, the Company may file a proposed interim revision of the surcharge for Commission approval.

For Customers receiving service under Schedule 10, the EE&C Surcharge is added to the Distribution Charge for billing purposes. For all other Customers, the EE&C Surcharge shall be set out separately on the Customer's bill.

Bills shall include an amount equal to the surcharge rate times the number of distribution energy and capacity sales as follows:

EE&C SURCHARGE			
Rate Schedule	Rate per kWh	Rate per kW	Rate per kW PLC
10	\$0.00233		
20	\$0.00129		
22	\$0.00108		
30 (small)*	\$0.00079	\$0.36	
30 (large)*			\$0.59
40			\$0.31
41			\$0.31
44			\$0.31
46			\$0.31

\*Rate Schedule 30 (small) defined as Customers receiving service under Rate Schedule 30 with a Kilowatt Demand less than 500 kilowatts, and Rate Schedule 30 (large) defined as Customers receiving service under Rate Schedule 30 with a Kilowatt Demand greater than or equal to 500 kilowatts. The Company will categorize Customers as those with Kilowatt Demands less than 500 kilowatts and those with a Kilowatt Demand greater than or equal to 500 kilowatts.

(I) Indicates Increase

Issued \_\_\_\_\_, 2010

Effective \_\_\_\_\_, 2010

WEST PENN POWER COMPANY

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**ENERGY EFFICIENCY AND CONSERVATION ("EE&C") SURCHARGE (Concluded)****ELIGIBLE COSTS**

Costs eligible for recovery through the EE&C Surcharge are approved by the Commission and include:

Program Costs -- Program Costs are the estimated costs for research, development, implementation, and operation of programs to be incurred by the Company and approved by the Commission. Program costs include, but are not limited to, Company labor, rebates and incentives, payments to third parties for program administration and implementation, direct marketing and advertising costs incurred by the Company, market research costs, program development, monitoring and evaluation, consultant and contractor fees, applicable software and software licenses, program measurement and monitoring hardware, and all other administrative activities associated with program development and implementation.

Annual Reconciliation Factor -- The Annual Reconciliation Factor corrects for over/under-collection of Program Costs and may reflect items such as an update of forecasted billing determinants, re-evaluation or re-design of EE&C programs, and re-allocation of Program Costs to the designated Rate Schedules. The Company will submit to the Commission by March 31 of each year: (1) a comparison between forecasted revenues billed and actual revenues billed through February, as adjusted for removal of gross receipts tax; (2) any adjustment to the forecasted revenues anticipated to be billed during March through May, as adjusted for removal of gross receipts tax; (3) any adjustment to the Program Costs levelized through May 2013 based upon actual costs incurred through February and any revised estimates for future months, subject to this Tariff's allocation portion of the amount permitted to be recovered under 66 Pa. C.S.A. §2806.1; and (4) the subsequent reconciliation effect to the EE&C Surcharge adjusted for gross receipts tax, and levelized over the period of the upcoming June 1 and continuing through the remaining months of the surcharge. There shall also be a final reconciliation of amounts to be collected or refunded after May 31, 2013.

WEST PENN POWER COMPANY

Supplement No. \_\_\_ to  
Electric-Pa. P. U. C. No. 37  
Original Page No. 5-4**ENERGY EFFICIENCY AND CONSERVATION ("EE&C") SURCHARGE**

In addition to the charges provided in this Tariff and in accordance with 66 Pa. C.S.A. §2806.1, there shall be a surcharge as set forth below to recover the costs associated with Company-sponsored programs for energy efficiency and conservation programs as approved by the Commission. This surcharge is applied to this Tariff to recover costs allocated to this Tariff. This surcharge will be applied each month until changed by the Commission. The resulting surcharge is in addition to any minimum charge set out in the Tariff and is added to the Customer's bill before any tax surcharge is levied against the Customer's total bill. Amounts billed hereunder shall be subject to late payment charges.

**CALCULATION OF SURCHARGE**

The EE&C Surcharge is calculated as a levelized surcharge through May 2013. The surcharge is calculated by separating the Program Costs allocated to this Tariff and dividing by forecasted distribution PLC demand sales. The calculation includes an Annual Reconciliation Factor adjustment and an adjustment for gross receipts tax. The Annual Reconciliation Factor adjustment will be filed by March 31 to become effective the forthcoming June 1. Upon determination that the surcharge, if left unchanged, would result in a material over/under-collection, the Company may file a proposed interim revision of the surcharge for Commission approval.

Bills shall include an amount equal to the surcharge rate times the number of capacity sales as follows:

**EE&C SURCHARGE**

Rate per kW PLC  
\$0.44

(I)

**ELIGIBLE COSTS**

Costs eligible for recovery through the EE&C Surcharge are approved by the Commission and include:

**Program Costs** -- Program Costs are the estimated costs for research, development, implementation, and operation of programs to be incurred by the Company and approved by the Commission. Program costs include, but are not limited to, Company labor, rebates and incentives, payments to third parties for program administration and implementation, direct marketing and advertising costs incurred by the Company, market research costs, program development, monitoring and evaluation, consultant and contractor fees, applicable software and software licenses, program measurement and monitoring hardware, and all other administrative activities associated with program development and implementation.

**Annual Reconciliation Factor** -- The Annual Reconciliation Factor corrects for over/under-collection of Program Costs and may reflect items such as an update of forecasted billing determinants, re-evaluation or re-design of EE&C programs, and re-allocation of Program Costs to this Tariff. The Company will submit to the Commission by March 31 of each year: (1) a comparison between forecasted revenues billed and actual revenues billed through February, as adjusted for removal of gross receipts tax; (2) any adjustment to the forecasted revenues anticipated to be billed during March through May, as adjusted for removal of gross receipts tax; (3) any adjustment to the Program Costs levelized through May 2013 based upon actual costs incurred through February and any revised estimates for future months, subject to this Tariff's allocation portion of the amount permitted to be recovered under 66 Pa. C.S.A. §2806.1; and (4) the subsequent reconciliation effect to the EE&C Surcharge adjusted for gross receipts tax and levelized over the period of the upcoming June 1 and continuing through the remaining months of the surcharge. There shall also be a final reconciliation of amounts to be collected or refunded after May 31, 2013.

(I) Indicates Increase

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