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pepco

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Keith Townsend
Assistant General Counsel

April 4, 2007

Ms. Dorothy Wideman
Commission Secretary
Public Service Commission
of the District of Columbia
1333 H Street, N.W.
2nd Floor, West Tower
Washington, D.C. 20005

Dear Ms. Wideman:

Enclosed for filing are an original and fifteen (15) copies of the Application Of Potomac Electric Power Company For Authorization To Establish A Demand Side Management Surcharge And An Advance Metering Infrastructure Surcharge And To Establish A DSM Collaborative And An AMI Advisory Group.

Please do not hesitate to contact me if you have any questions.

Sincerely,

Keith Townsend

KT/vej

Enclosure

cc: Elizabeth Noel, Esq. (District of Columbia Office of the People's Counsel)
Ralph McMillan (District of Columbia Department of the Environment Energy Office)

1056-E-1

BEFORE THE
DISTRICT OF COLUMBIA
PUBLIC SERVICE COMMISSION

IN THE MATTER OF	)	
	)	
The Application of	)	
Potomac Electric Power Company	)	
For Authorization To Establish A	)	Formal Case No. _____
Demand Side Management Cost Recovery	)	
Mechanism And An Advanced Metering	)	
Infrastructure Rate Adjustment Mechanism	)	
And To Establish A DSM Collaborative	)	
And An AMI Advisory Group	)	

APPLICATION
OF
POTOMAC ELECTRIC POWER COMPANY

April 4, 2007

BEFORE THE
DISTRICT OF COLUMBIA
PUBLIC SERVICE COMMISSION

IN THE MATTER OF	)	
	)	
The Application of	)	
Potomac Electric Power Company	)	
For Authorization To Establish A	)	Formal Case No. _____
Demand Side Management Cost Recovery	)	
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Infrastructure Rate Adjustment Mechanism	)	
And To Establish A DSM Collaborative	)	
And An AMI Advisory Group	)	

APPLICATION OF
POTOMAC ELECTRIC POWER COMPANY FOR
AUTHORIZATION TO ESTABLISH A
DEMAND SIDE MANAGEMENT COST RECOVERY MECHANISM AND
AN ADVANCED METERING INFRASTRUCTURE RATE
ADJUSTMENT MECHANISM AND TO ESTABLISH
A DSM COLLABORATIVE AND AN AMI ADVISORY GROUP

Potomac Electric Power Company ("Pepco" or "Company") is instituting a comprehensive demand response, advanced metering and energy efficiency plan which is a "Blueprint for the Future" for Pepco's District of Columbia customers. This plan will help Pepco's District of Columbia electricity customers conserve energy, reduce peak electricity demand and lessen future energy costs.

This is another step towards providing the District of Columbia customers with better tools and access to information about their electricity bills and usage as well as exerting overall downward pressure on regional electricity rates. The District of Columbia smart meter pilot project was the first step towards this goal. In addition, the Blueprint will help to ensure the continuing reliability of electricity supply and enhance the quality of electric distribution

services. As part of this comprehensive plan, Pepco seeks the authorizations requested herein that will enable the Company to make the necessary investments to make the Blueprint a reality for Pepco's District of Columbia customers. As described in summary fashion below and in greater detail in the Attachment, Pepco is seeking authorization to administer demand side management ("DSM") programs and to recover the non-capital costs associated with these programs through either the existing Reliable Energy Trust Fund ("RETF") surcharge or a new distribution surcharge. The formal set of DSM programs will be developed through a proposed DSM Collaborative. In addition, Pepco is seeking authorization to establish a separate Advanced Metering Infrastructure ("AMI") rate adjustment mechanism to recover the costs associated with the installation of advanced metering infrastructure and capital cost of a smart thermostat system that will enhance reliability and better serve our customers. In association with the rollout of AMI, Pepco also is requesting that the Commission establish an AMI Advisory Group that Pepco will keep apprised of the scheduled rollout, technology to be used, data enhancements and other issues related to AMI. Alternatively the Smart Meter Working Group, established by the Commission's March 23, 2007 Order No. 14239 in Formal Case No. 1049, can be authorized to advise the Company on its AMI implementation plans.[1]

Finally, another key component of the proposed DSM programs is the Bill Stabilization Adjustment ("BSA") that is under review in the Company's recently filed distribution rate case, Formal Case No. 1053. Although the BSA is a critical component of the establishment and success of the Company's proposed DSM programs, the BSA already is under review in Formal

[1] Pepco is already involved with Smart Meter deployments in the District of Columbia which is the subject of the Commission's Smart Meter Working Group. Pepco's AMI proposals go beyond Smart Metering. If the Commission adopts this alternative, then Pepco would request that the Smart Meter Working Group be converted into an Advisory Group on AMI and a report from the group be filed with the Commission within 180 days.

Case No. 1053 and the Company is not requesting that consideration of the BSA be moved to this proceeding.

The Blueprint for the Future, which will be implemented across all of the service territories of Pepco Holdings, Inc. ("PHI"), is designed to better enable customers to manage their electricity bills through energy efficiency programs and an expanded opportunity to see and react to price signals in the market. With this expanded customer access to information and ability to react to price signals in the market, it is expected that regional electricity wholesale capacity and energy prices ultimately will be reduced, particularly as a result of reduced peak demands.

A recent study, prepared by The Brattle Group and sponsored by five Mid-Atlantic public utility commissions and the PJM Interconnection, found that a modest reduction in electricity use during peak hours would reduce energy prices by at least $57 million to $182 annually in the Mid-Atlantic region.[2] The study examined the effects of reducing electricity use by three percent during the highest use hours for five utility areas. It notes: "[m]ore widespread participation ... and deeper curtailments would result in even greater price impacts ...."[3] Finally, it underscores the importance of demand response to the District of Columbia and provides further support for the authorizations requested by the Company in this filing. The DSM programs, both energy efficiency and demand response, that are part of the Blueprint for the Future, are further enabled by the Company's investments in new technology to best meet Pepco's District of Columbia customers' needs.

[2] *See* Brattle Report, Quantifying Demand Response Benefits in PJM (January 29, 2007).

[3] *See* Brattle Report, Quantifying Demand Response Benefits in PJM at 32.

To provide the Commission with context for approving the cost recovery mechanism for the energy efficiency and demand side management programs and AMI, this filing contains a summary of the programs that are proposed, and a more detailed Attachment with specific program and program budget estimates. This is intended to provide the Commission with sufficient information to authorize the cost recovery mechanisms for these programs and to serve as a starting point for the Pepco specific DSM Collaborative. At this time, Pepco is not requesting cost recovery for any specific program; the filing requests authorization to establish surcharges that will enable the future cost recovery of any Commission approved programs. Such authorization will enable these programs to move forward, as well as provide necessary assurances to the investment community that these costs will be fully recovered through appropriate and timely mechanisms.

Pursuant to D.C. Code Section 34-901 and Sections 101 and 104 of the Commission's regulations 15 D.C.M.R. §§ 101 and 104, Pepco seeks Commission approval of its Application requesting: (1) administrative responsibility for non-low income DSM programs, (2) authority to recover DSM cost through the RETF or a new distribution surcharge, (3) establishment of a new Pepco-specific DSM Collaborative; (4) an advanced metering infrastructure rate adjustment mechanism that will permit Pepco to recover the costs of the installation of advanced metering throughout the District of Columbia[4] and accompanying demand response enabling equipment for its District of Columbia customers, and (5) an AMI Advisory Group that will be kept apprised of the progress, status, components and development

[4] In Formal Case No. 1002, the Commission approved rates for a two year smart meter pilot project. *Order No.* 14166 (January 12, 2007). Pepco filed revised tariffs implementing Order No. 14166 on February 1, 2007. The Smart Meter Pilot Program, Inc. ("SMPPI") company was created as a non-profit to implement the pilot program. SMPPI is comprised of Pepco, the District of Columbia People's Counsel, the District of Columbia Public Service Commission, the International Brotherhood of Electrical Workers Local 1900, and the District of Columbia Consumer Utility Board.

of Pepco's AMI installation.[5] Each of these requests is discussed in more detail below.

OVERVIEW AND SUMMARY

Pepco's Blueprint For The Future

Pepco's vision of the future involves a substantial investment in new technologies such as advanced meter infrastructure, distribution automation, smart thermostats linked to the AMI system, and an improved communications network. This vision will be met by designing and implementing these technologies and processes across the regions PHI serves. In the Attachment to this filing, the Company provides details on the components of this plan.

1. Energy Efficiency Will Assist Customers With Managing The Rising Cost Of Energy

Over the past several years the rising cost of energy has affected Pepco's customers, who have only a limited ability to lessen their energy use and lower their energy costs. Nevertheless, the Company has provided its customers with options to more efficiently manage their energy use. For example, last year PHI and Pepco launched the "Energy Know How" campaign. PHI invested over $1,000,000 to implement state of the art energy auditing software. This investment now enables all of Pepco's customers to go on the internet and view data about their monthly bills to better understand how they use energy and what changes might reduce their overall costs.

This filing is the next step in responding to customer concerns by giving them more robust and sophisticated energy efficiency tools to manage their electricity consumption, and reduce their costs for electricity through reduced consumption. The Company's plans also include demand response programs designed to influence consumer behavior in energy use to reduce on peak electricity demands, and thereby drive total electricity costs down for District of

[5] As discussed, conversion of the Smart Meter Working Group into an AMI Advisory Group and the filing of a report with the Commission within 180 days could serve as a forum for advising Pepco on its AMI implementation plans.

Columbia consumers. The data and communications capabilities inherent in the advanced metering proposal that the Company is planning will give each customer a platform from which they can manage overall energy costs. Pepco envisions that in the future the new technology will enable customers' appliances to receive and automatically react to real time electricity prices. Some of these technologies will take time and need to be tested, but many are ready to be implemented immediately. The smart meter pilot project should provide detailed information about how customers will react and respond to several rate options enabled through smart metering technology.

With the participation of the Commission Staff, the Office of People's Counsel ("OPC"), District of Columbia Department of the Environment Energy Office ("DDOE") and other interested stakeholders, the Company fully expects that a collaborative process will prove beneficial to the interests of all parties to assist District of Columbia customers to manage their energy consumption and costs. The smart metering pilot program is an example of such efforts.

The key components of this filing - advanced metering, energy efficiency and demand response - each will require key stakeholders to work collaboratively to achieve the best results for Pepco's District customers. This joint effort will be important as Pepco implements District-wide energy efficiency and demand response programs. Working with partners such as the District DDOE will help to identify best practices in the energy efficiency arena as well as leverage the benefits of existing efficiency initiatives. The Company's proposed DSM Collaborative should include, Pepco, the Commission Staff, OPC, and DDOE. This group should begin meeting in May 2007 using Pepco's proposed programs as a starting point. PHI, the parent company of Pepco, has joined the National Action Plan on Energy Efficiency

Coalition, a broad-based group of utilities, environmental advocacy groups, state utility commissions and others working together on environmental issues.

Below is a summary of the proposed programs and infrastructure plans that will take Pepco and its customers into the future.

A. Demand Side Management

In addition to the many technology platforms outlined in the Attachment, the Company will propose a number of programs for Pepco's customers. These programs will be refined and possibly expanded through Pepco's proposed DSM Collaborative. Pepco will propose programs that fall into two categories: Energy Efficiency and Demand Response. Below is a brief description of some of the types of residential and commercial programs the Company will propose.

Energy Efficiency	**Demand Response**
Home Performance	Smart Thermostat
HVAC	Critical Peak Pricing
Lighting	Internet Demand Response
Building Commissioning	
Prescriptive Audits	
Custom Audits	
Lighting and Appliances	

These programs, coupled with appropriate investments in technology, will provide the tools for all of Pepco's distribution customers to manage and take control of their electricity costs, including reducing the cost of energy consumption. Again, more detail, including cost estimates and cost benefit analyses, is provided in the Attachment to this Application.

B. Advanced Metering and Related Technology

1. AMI Infrastructure

AMI will provide customers and the utility with more detailed and timely information on energy use. The Company will replace 256,357 existing electric meters with new computer imbedded advanced meters. These advanced meters will ultimately allow the Company to collect and transmit customer information such as billing data, usage patterns, voltage levels and outage information, and ultimately send information to Pepco's computer systems, where the Company can process it and use it to better serve customers. This system can also be used to communicate directly to customers' thermostats and appliances and control the operation of this equipment based on energy prices. In the future, this same system will permit Pepco to send information to customers, through a display in the customer's homes or to an internet site, the price of electricity – either real time prices or day ahead pricing. Eventually appliances will be in homes and businesses that are able to directly respond to energy prices.

In addition to the direct customer benefits, the Company expects several service quality improvements from AMI technology, such as the ability to remotely turn customers on/off (an advantage in areas with high turnovers in occupancy), theft detection and, as the Company will be able to monitor (as opposed to estimate) actual load, more accurate service transformer and wire sizing. Customer restoration will be improved due to more detailed information concerning the number and location of customers out of service coming from the advanced meters. Not only will this allow us to more quickly respond, but it will also help us better pinpoint the location of the problem. Pepco will share with the AMI Advisory Group a more detailed plan supporting full scale implementation of AMI technology. Finally, there are also added benefits to retail

suppliers regarding access to immediate and detailed information regarding their customers' accounts.

The Commission has approved a two year smart meter pilot program through the Smart Meter Pilot Program, Inc. non-profit company ("SMPPI"). The existing program being implemented by SMPPI[6] will provide information about customer response to AMI enabled pricing. The SMPPI smart meter pilot program is not intended to test the underlying technology, but will determine customer interest in pricing options based upon AMI technology. This customer information will be used by Pepco to design future pricing options after the AMI installation is completed.

On March 23, 2007, the Commission issued Order No. 14239 in Formal Case No. 1049. The Order established a Smart Meter Working Group to address the deployment of smart metering technology under the Energy Policy Act of 2005 ("EPA"). A report is to be filed by the Smart Meter Working Group within 90 days of the Order on the SMPPI smart meter deployment and other issues identified by the Commission in paragraph 19 regarding compliance with the EPA. The Commission's Smart Meter Working Group is comprised of the very parties Pepco has identified for its proposed collaborative AMI Advisory Group. As an alternative to a separate AMI Advisory Group, Pepco believes that its AMI proposals can be discussed through conversion of the Smart Meter Working Group into an Advisory Group. A report on AMI would be filed within 180 days of Commission approval.

2. Customer Information Systems Enhancements

Within PHI there are two customer information systems ("CIS") and a variety of meter inventory management systems. Two new PHI-wide systems, one for meter data management and a second for customer information, will allow us to better use the greatly increased

[6] *See* footnote 4.

information coming from the automated meter reading system and new automated field devices. Although the Company is not proposing in this filing that it embark on the replacement of Pepco's CIS, the Company does recognize that eventually the Company will be limited in the use of some technology, such as advanced metering, by the current capabilities of the existing system. However, the Company plans to implement a new meter data management system as part of this effort.

3. AMI Related Communications Network Upgrades

Pepco will improve the Company's communications network to accommodate the increased flow of customer and distribution system data to and from Pepco's operational centers. A fixed communications network provides the most robust and secure communications platform for AMI and Distribution Automation ("DA").[7] This network would take information to Pepco's substations; from there it would travel over a private fiber network to Pepco's main offices. While all of Pepco's transmission substations are served by fiber, the Company has plans to install fiber at its distribution substations as well. It is important to leverage this network across all of Pepco's technology investments, as it will reduce communications expenses for all supported applications.

C. Cost Recovery Proposals

The deployment of AMI technology will require the removal and disposition of existing meters that are not fully depreciated and will require replacement of, or significant modification

[7] Distribution automation is a technology designed to lower the number and length of electric system outages. The Company will install a number of intelligent relay devices, circuit switching devices, advanced protective devices and computer programs to more accurately detect and determine problems on the system. In many cases, once problems are identified and located, a new technology will automatically isolate the problem areas and reconfigure the system to provide electric service to customers outside the problem area. This will result in fewer outages, faster restoration and other operating efficiencies. Distribution automation is highly interrelated to the advanced meters and enhanced communications network. Therefore, in the near term, the Company also plans system enhancements that will build on the new facilities to provide increased customer service and reliability.

to, existing meter reading, communications, and customer billing and information infrastructure. To encourage the deployment of this new technology, the Commission should authorize: ratemaking policies that remove a utility's disincentive toward demand-side resources that reduce throughput; and provide for timely cost recovery of prudently incurred AMI expenditures in order to provide cash flow to help finance new AMI deployment.[8]

1. Bill Stabilization Adjustment Mechanism

The Company has proposed, in Formal Case No. 1053, a Bill Stabilization Adjustment mechanism ("BSA") to be applied on a quarterly basis for all customers. The initial and most visible benefit of the BSA is to reduce the volatility in the distribution charge on customer bills. In severe weather in which customers face sharply higher bills, the BSA will reduce the payments that would otherwise be due. Conversely under the BSA, customers will pay more for delivery in mild weather than they would otherwise, but their overall bills will still be lower compared to what they would be with normal weather. In short, customers' electric distribution bill variability will decrease. The Commission should consider and approve the BSA in Formal Case No. 1053.

2. DSM Cost Recovery Mechanism Surcharge Proposal

As the cost recovery mechanism for Pepco's proposals in this Application, the Company proposes that the Commission use the distribution surcharge mechanism approved by the Commission to implement the RETF in Formal Case No. 945. The RETF was established by the Commission pursuant to its December 29, 2000 Order No. 11876 in compliance with the

[8] *See* ERE-1 *Resolution to Remove Regulatory Barriers to the Broad Implementation of Advanced Metering Infrastructure,* Adopted by NARUC Board of Directors on February 21, 2007, NARUC Winter Meetings, Washington, DC.

District's electric restructuring legislation.[9] The purpose of the RETF is to cover the cost of Commission authorized universal service, energy efficiency and renewable resource programs. These programs are administered by DDOE. The RETF is funded through a distribution surcharge pursuant to D.C. Code §34-1514(b)(2006). The non-bypassable surcharge is on residential Pepco customer bills and collected from all electricity customers who are not Residential Aid Discount customers. The current surcharge is $0.00090 per kWh pursuant to the Commission's January 18, 2007 Order No. 14171 in Formal Case No. 945. Pepco proposes that the Company operate energy efficiency programs in the District as discussed above. Under this plan, DDOE will continue to manage low income programs.

In the alternative, Pepco requests that the Commission establish a distribution surcharge mechanism that would recover all DSM expenditures, other than smart thermostat related costs, over a five year period. Program costs would be allocated to each rate class eligible to participate in each implemented program. Pepco's annual carrying cost of any unrecovered expenditures would equal the Company's approved rate of return.

The surcharge amount would be established by an annual Pepco DSM surcharge adjustment filing, subject to Commission approval, based upon the forecast level of expenditures for the next program year and any required "true-up" adjustments for over or under collections from the prior year. If Pepco's recommended DSM programs were implemented, the estimated maximum monthly surcharge for residential customers would be $0.001252 per kWh and $0.000500 per kWh for nonresidential customers.

3. AMI Adjustment Mechanism

Pepco requests that a base rate electric adjustment mechanism ("AMI Rate Adjustment Mechanism") be adopted to recover the capital costs associated with the installation of smart

[9] Retail Electric Competition and Consumer Protection Act, D.C. Code §§34-1501-1520 (2006).

thermostats and the AMI on a timely basis between distribution base rate cases. Specifically, the AMI Rate Adjustment Mechanism would be set annually on the basis of total project expenditures during the previous 12 month period. Pepco proposes to net any utility cost savings resulting from AMI deployment from the cost recovery sought each year.

Pepco requests that the cost of retiring all existing meters be recovered through the AMI Rate Adjustment Mechanism over a three to five year period to recover stranded costs. Pepco's annual return on any unamortized expenditures would equal the Company's authorized rate of return. The amount of the AMI Rate Adjustment Mechanism would vary by customer class, reflecting any AMI or smart thermostat cost differences. If the Commission approves the AMI Rate Adjustment Mechanism, the monthly bill impact on customers after full AMI deployment is estimated to be $7.00 for each electric customer. These costs will be offset by energy cost reductions, utility cost reductions and service quality improvements.

An alternative utility cost recovery approach could be obtained through electric base rate case filings. This mechanism, however, has the significant disadvantage of delaying the timing of Pepco's cost recovery for a significant capital cost project and having a potentially adverse impact upon the Company's cost of capital.

COMMUNICATION

Please forward copies of all correspondence and any other materials related to this filing to:

Kirk J. Emge
Keith Townsend
Potomac Electric Power Company
701 9th Street, NW
Washington, D.C. 20068

CONCLUSION

The Company requests that the Commission issue an order authorizing: (1) a demand side management cost recovery mechanism and the costs associated with demand side management programs that will be reviewed and discussed in a Pepco-specific DSM Collaborative; (2) an advanced metering infrastructure rate adjustment mechanism that will recover the costs of Pepco's installation of advanced metering for its District of Columbia customers; (3) a DSM Collaborative for review and discussion of Pepco's proposed DSM programs; and 4) an AMI Advisory Group that will be kept apprised of the progress, status and development of Pepco's AMI installation, or alternatively convert the Smart Metering Working Group established by the Commission in Formal Case No. 1049 into an AMI Advisory Group to report on Pepco's AMI installation proposals within 180 days.

The various elements of this filing all are critical components of the Pepco Blueprint for the Future, which is designed to improve service reliability and outage reporting as well as bringing Pepco's District of Columbia customers significant benefits from conservation, energy efficiency, and greater control over their electric usage and billing. It is essential that the Commission make the requested authorizations so that the Company can move forward with the cost effective implementation of the programs in the District of Columbia.

Pepco recommends that the DSM Collaborative proposed in this filing should convene in May 2007 or as soon as possible and complete its discussion of the proposed Pepco DSM and energy efficiency programs by October 1, 2007. As Pepco and PHI move forward with a plan for implementation of the programs described above throughout the District of Columbia, the Company will provide additional details and specific costs that will be recovered through the surcharges described briefly above, and in more detail in the Attachment.

Respectfully submitted,

Keith Townsend

Keith Townsend
Assistant General Counsel
Potomac Electric Power Company

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Of Counsel For Potomac Electric Power Company

Washington, D.C.
April 4, 2007

cc: Elizabeth A. Noel, Esq. (Office of the People's Counsel)
Ralph McMillian (District of Columbia Department of the Environment Energy Office)

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE DISTRICT OF COLUMBIA

IN THE MATTER OF	)	
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For Authorization To Establish a	)	**Case No.**
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Recovery Mechanism and An Advanced	)	
Metering Infrastructure Rate	)	
Adjustment Mechanism and To	)	
Establish a DSM Collaborative and	)	
An AMI Advisory Group	)	

ATTACHMENT

Dated: April 4, 2007

Potomac Electric Power Company
Attachment
Filed April 4, 2007

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ATTACHMENT

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INTRODUCTION

This document contains the details of the Potomac Electric Power Company's ("Pepco", "the Company") Blueprint for the Future Plan ("Blueprint Plan," "Plan"), which ultimately will be introduced across all of Pepco Holdings Inc.'s ("PHI") electric distribution companies and their various jurisdictions.[1] The purpose of the Company's Blueprint for the Future is to set forth Pepco's comprehensive vision of the future whereby the Company's District of Columbia customers will have utility provided energy efficiency, demand response, and pricing options that are provided through new utility programs and utility installation of new technology. In combination, these new utility initiatives will enhance District of Columbia customers' ability to manage their electricity bills and improve key components of electric distribution service.

In addition to providing direct customer savings, over time the resulting electric energy and demand savings are expected to place significant downward pressure on regional electricity energy and capacity prices for all District of Columbia customers. Reductions in peak electricity demand are expected to help the Company maintain the reliable supply of electricity as demand growth continues to require increasing reliance on regional transmission system capabilities for imports of electricity. Energy efficiency improvements and increasing reliance on renewable electricity generation are expected to reduce power plant air emissions and associated greenhouse gases.[2] New metering technology that supports time differentiated pricing options is expected to accelerate consumer adoption of plug-in electric vehicles and will provide additional electricity market financial incentives for the installation of renewable generation technologies capable of producing energy during periods of high electricity demand. The increasing use of plug-in vehicles and renewable generation technologies will help to reduce the

[1] PHI is the holding company of the Atlantic City Electric Company, the Delmarva Power & Light Company, and the Potomac Electric Power Company. Collectively these companies deliver electricity to customers in New Jersey, Delaware, Maryland, the District of Columbia, and Virginia. In addition, Delmarva delivers natural gas to customers in Delaware.

[2] Pepco's proposed DSM programs are expected to reduce regional CO^2 power plant emissions by at least 123,500 tons at the conclusion of three program years. This estimate was derived based upon the regional PJM generation supply mix adjusted by the District of Columbia Renewable Portfolio Standard requirements.

nation's dependence upon foreign sources of energy, improve regional air quality, and reduce future quantities of green house gas emissions.

The critical components of Pepco's Blueprint Plan are: 1) comprehensive utility provided cost-effective energy efficiency programs that are designed to provide savings opportunities for all District of Columbia electric distribution customers, 2) cost-effective demand response programs designed to reduce electricity demand during periods of high market prices[3], 3) deployment of an advanced metering system for all District of Columbia customers to support new time differentiated rate options for customers and to provide customers with improved electric distribution service, 4) Pepco management of an improved renewable energy demonstration program, and 5) proposed cost recovery mechanisms that permit Pepco to recover the substantial utility investments necessary to implement the Blueprint Plan. A critical financial underpinning of the Plan is the Commission's near-term approval of Pepco's proposed District of Columbia distribution rate case[4] Bill Stabilization Adjustment Mechanism ("BSA"). If the BSA is not approved, much of the Blueprint Plan will not be financially feasible for the Company.

Pepco looks forward to implementing its Blueprint Plan in the near future and to working collaboratively with District of Columbia electricity market stakeholders on the development of the final components of its proposed demand side management programs and to working with District of Columbia stakeholders in an advisory manner related to its planned AMI System deployment.

[3] The Company's and competitive suppliers' ability to offer new time differentiated rates, such as critical peak pricing, will be supported by the deployment of an AMI System. These pricing options are expected to significantly support appropriate demand response activities, but the benefits of these pricing options have not been included in the cost-effectiveness analysis.

[4] See District of Columbia Public Service Commission Case No. 1053.

Potomac Electric Power Company
Attachment
Filed April 4, 2007

PEPCO'S BLUEPRINT FOR THE FUTURE PLAN

DEMAND-SIDE MANAGEMENT

I. Demand-Side Management

1. Proposed Programs

Pepco developed its recommended energy efficiency and demand reduction programs on the following basis[5]: 1) service territory building characteristics, 2) service territory weather, 3) customer annual electricity consumption, 4) inclusion of measures expected to be cost-effective under the All Ratepayers Test (including the avoided cost of energy, capacity, and transmission), 5) review of existing District of Columbia energy efficiency programs managed by the District of Columbia Department of the Environment ("DDOE"), and 6) current best practices in the design of DSM programs.[6] Pepco anticipates that the final set of approved DSM programs will be revised and refined further through the Company's proposed DSM collaborative. The Company has sought to develop DSM program participation opportunities for all of its electric distribution customers where the implementation of measures is projected to be cost-effective. A detailed discussion of the Company's DSM cost-effectiveness screening is contained in Appendix A of this document. Pepco anticipates that DDOE will continue its efforts to offer energy related services targeted to assisting District of Columbia low income residents in managing their electricity costs. The Company recommends that DDOE's existing non-low income energy efficiency and renewables programs be discontinued when Pepco's proposed programs become available to customers. Pepco will work closely with DDOE to ensure a smooth transition from the existing programs to the new programs.

As noted earlier, the proposed programs are expected to result in significant additional unquantified direct Pepco District of Columbia customer benefits that include: greater customer ability to control electricity bills; reductions in power plant air

[5] Pepco retained ICF International, a nationally recognized DSM consulting firm, to assist in the cost-effectiveness screening of DSM measures and the development of recommended DSM programs.

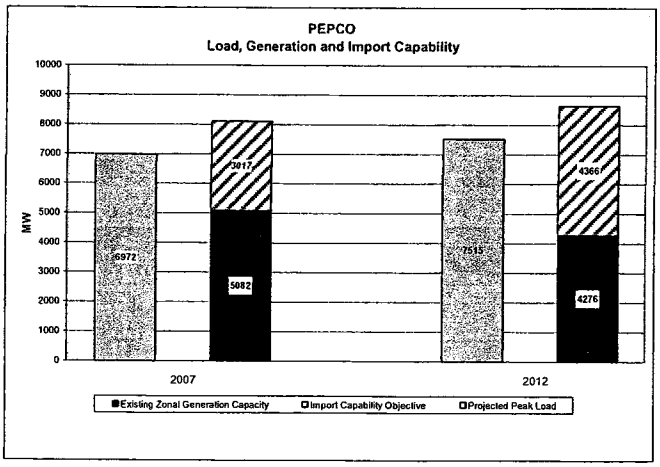
[6] The Company notes that significant DSM operational benefits will be achieved by implementing similar PHI sponsored programs regionally; however measures appropriate for each jurisdiction are expected to vary somewhat.

emissions (including reductions in emitted green house gases); reductions in regional wholesale (and thereby retail) electricity capacity and energy prices; improvements to the reliability of increasingly constrained regional transmission import capability; and assisting to address future generation supply constraints as regional summer load growth continues while the expected regional construction of new generation supply remains at a low level.[7] DSM programs implemented by Pepco will provide similar "spill-over" benefits to other regional electricity consumers in and outside of the District of Columbia. Similarly, if PHI is permitted to implement DSM programs throughout much of its footprint, District of Columbia electricity consumers will benefit indirectly from those programs through downward pressure on electricity market prices, increased regional environmental benefits, and increased program operational efficiencies.

A list of Pepco's recommended DSM programs and renewable generation programs is presented below in Table 1. The list includes programs designed primarily to

[7] The volatility of real-time PJM Pepco Zonal Locational Marginal Prices ("LMP") for energy increased significantly during 2006 compared with recent prior years. This volatility was caused by high summer electricity demand and regional transmission import constraints. Hourly LMP prices over the fifty highest priced hours during July and August ranged from $0.21 to $0.81 per kWh. Electricity suppliers must price their offers to supply Standard Offer Service or to directly supply customers to reflect this increasing volatility.

Electricity supply in the PJM Pepco Zone is becoming increasingly reliant upon transmission imports due to the near absence of new generation construction within the region. The table below contains the PJM forecasted Pepco demands and required reserve margins with the Zonal availability of generation in 2007 and 2012.



reduce peak electricity demand (demand response programs) and programs designed to reduce overall electricity energy use (energy efficiency programs). The Company has developed impact estimates regarding the first three years of program operation. It is anticipated that program modifications will be made during the fourth year of program implementation after program evaluations are conducted during the third year of implementation.

Table 1

Pepco's Proposed District of Columbia DSM Programs
(Three Year Implementation Period)

Program	Customers	Measures[8]	Peak Demand Reduction (kW)	Annual Energy Reduction (MWh)
Non-Residential				
Bldg. Commissioning and O&M	600	182,000	13,300	73,000
HVAC Efficiency	4,670	70,000	8,700	18,200
Prescriptive	1,330	133,000	2,900	21,000
Custom	4,600	2,727,000	31,400	56,000
Smart Stat	3,500	87,000	19,900	500
Internet DR Platform	100	N/A	10,000	100
Commercial Total	**14,800**	**3,199,000**	**86,200**	**168,800**
Residential				
Home Performance	4,000	4,000	4,500	9,000
HVAC	3,000	3,000	1,000	1,600
Lighting and Appliances	38,500	231,000	5,400	14,400
Smart Stat	7,000	7,000	7,000	3,500
Residential Total	**52,500**	**245,000**	**17,900**	**28,500**
Total Portfolio	**67,300**	**3,444,000**	**104,100**	**197,300**

[8] The units for "measures" vary with program type. Examples of measures include the purchase and installation of specific energy efficient end-uses.

At the conclusion of three years, these programs are projected to achieve a total peak electricity demand reduction of 104 MW and an annual electric energy reduction exceeding 197,000 MWh. Over 67,000 customers[9] are expected to participate and to achieve the installation of over 3.4 million energy efficiency or demand response measures. If the Commission approves each of the programs recommended by Pepco at the proposed rebate levels and the projected penetration rate is achieved, the annual cost of the programs is estimated to be $7.9 million for year one, $9.3 million for year two, and $13.4 million for year three. The total cost over a three year period is expected to be approximately $31 million, including program start-up expense. Additional DSM program expenses are expected during the fourth program year, but have not been projected due to the expected modifications of programs after evaluations are completed during the third year of program implementation.[10] The Company anticipates that it will also incur six to nine months of program start-up expense that would consist of approximately $200,000 of internal labor related expense, an additional $100,000 of contractor support, and $200,000 for a DSM tracking database for a total start-up expense of $500,000. Table 2 presents a summary of the proposed three year budget by proposed program.

[9] Customers may elect to participate in more than one offered DSM program.

[10] Future capital expense associated with installation of smart programmable thermostats is expected to be significant as customer participation rates increase over time.

Table 2
Pepco's Projected District of Columbia DSM Program Costs

Program	Total Cost Year 1	Total Cost Year 2	Total Cost Year 3	Three Year Total
Start-Up Costs				**$500,000**
Non-Residential Programs				
Building Commissioning and O&M	$635,000	$768,000	$943,000	**$2,346,000**
HVAC Efficiency	$1,634,000	$1,972,000	$2,432,000	**$6,038,000**
Prescriptive Rebate	$269,000	$323,000	$399,000	**$991,000**
Custom Incentive	$1,330,000	$1,601,000	$1,983,000	**$4,914,000**
Smart Stat	$177,000	$320,000	$1,139,000	**$1,636,000**
Internet DR Platform	$265,000	$65,000	$77,000	**$407,000**
Commercial Total	**$4,310,000**	**$5,049,000**	**$6,973,000**	**$16,332,000**
Residential Programs				
Home Performance	$1,540,000	$1,840,000	$2,270,000	**$5,650,000**
HVAC Efficiency	$220,000	$260,000	$330,000	**$810,000**
Lighting and Appliances	$160,000	$210,000	$270,000	**$640,000**
Smart Stat	$133,000	$442,000	$2,034,000	**$2,609,000**
Residential Total	**$2,053,000**	**$2,752,000**	**$4,904,000**	**$9,709,000**
General Awareness Campaign	$1,300,000	$1,300,000	$1,300,000	**$3,900,000**
Renewable Demo. Program	$200,000	$200,000	$200,000	**$600,000**
Total Portfolio	**$7,863,000**	**$9,301,000**	**$13,377,000**	**$31,041,000**

The Commission has the option of permitting DSM utility cost recovery in different ways. A detailed discussion of those cost recovery mechanisms is contained in the Blueprint Cost Recovery section of this document. If an electric DSM distribution surcharge were established to recover these expenses over a five year period, the average monthly residential electric bill would increase by approximately $0.93. Non-residential customers could also expect a similar minimal impact. The financial benefit derived from these expenditures will be well in excess of this cost for all District of Columbia

Pepco electricity consumers for both program participants and non-participants over a thirty year period. Additional unquantifiable benefits in the form of reduced green house gases caused by power generating stations, added customer control over electricity bills, and reliability related improvements will be obtained.

2. Advanced Metering Infrastructure[11]

An important element supporting Pepco's recommended demand response programs is the deployment of an advanced metering system capable of providing hourly energy consumption data for all customers that can support voluntary pricing options whereby electricity prices for customers more closely track wholesale electric energy and capacity prices. In this manner, customers will be incented to reduce their electricity consumption during high priced periods. In addition to helping participating customers control their electricity bills, the optional rate structures will help to place significant

[11] The Commission initiated Case No. 1049 through Order No. 10416 on July 31, 2006. This inquiry was established to address from the requirement of Title VII, Subtitle E of the Energy Policy Act of 2005 ("Act") for state commissions to consider certain ratemaking standards for electric utilities.

Under Section 1252 of the Act:

> Not later than 18 months after the date of enactment of this paragraph, each electric utility shall offer each of its customer classes, and provide individual customers upon customer request, a time-based rate schedule under which the rate charged by the electric utility varies during different time periods and reflects the variance, if any, in the utility's costs of generating or purchasing electricity at the wholesale level. The time-based rate schedule shall enable the electric consumer to manage energy use and cost through advanced metering and communications technology.

In addition, Section 1252 of the Act describes other criteria to consider with regard to the smart-metering standard.

In response to Commission Order No. 10416, Pepco filed its comments on August 30, 2006, and noted that no additional activities were required by the Commission at this time. In the Company's Reply Comments filed on September 14, 2006, Pepco noted that Commission establishment of a Working Group would be one way to address the Act's smart metering requirements. On March 23, 2007, the Commission issued Order No. 14239 establishing a Smart Metering Working Group. The Order requires the Working Group to submit a report regarding the appropriateness of implementing a smart metering program in the District of Columbia and to provide that report to the Commission within ninety days. In this filing Pepco has announced its plans to install advanced meters for all District of Columbia electricity customers; therefore, the Commission established Smart Metering Working Group should be revised to serve as an AMI Advisory Group to Pepco on the deployment of an AMI System in the District of Columbia.

downward pressure[12] on regional wholesale electric energy and capacity prices during peak load periods, thereby reducing future electricity supply costs for all District of Columbia consumers.

Pepco has linked the rollout of its proposed remotely controllable smart thermostat deployment to coincide with the deployment of its proposed advanced metering system for the following reasons: First, the advanced metering system and the smart thermostats can be designed in a manner whereby the communications infrastructure is shared by both systems – helping to reduce the total cost of the system. Second, it may be possible to install a system where the advanced meter and the smart thermostat ("smart stat") can communicate directly with one another to enhance future program opportunities. Third, a critical problem with existing air conditioning cycling programs, including Pepco's Kilowatchers Program, is the Company's inability to determine remotely whether cycling equipment is functioning properly – a problem that is remedied by implementing these in a coordinated fashion. Fourth, the value to an individual customer of a smart thermostat is significantly enhanced if the consumer receives an hourly market based price signal that directly rewards the participating customer for achieved load reductions. Any delay in deploying an advanced metering system in the District of Columbia will also delay Pepco's ability to offer smart thermostats to residential and small commercial customers.

It is important to note that the deployment of an advanced metering system will help to support all DSM program efforts by permitting the Company to offer optional innovative pricing options to its customers that help customers to directly capture the benefits of reducing their electricity demand during high priced periods through either

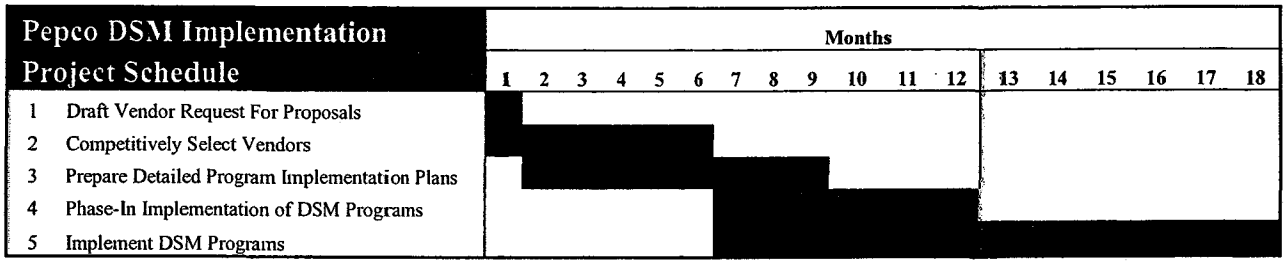
[12] A recent study issued on January 29, 2007, entitled "Quantifying Demand Response Benefits in PJM," which was prepared by The Brattle Group on behalf of the PJM Interconnection, LLC and the Mid-Atlantic Distributed Resources Initiative ("MADRI"), has quantified the significant reduction in regional wholesale electricity market prices that occur as a result of a 3 percent reduction in electricity load. The study found that curtailing 3 percent of the BGE, Pepco, PECO, Delmarva, and PSEG load during the highest 133 to 152 load hours would reduce energy prices during those hours by 5 to 8 percent or $8 to $25 per MWh. The weighted average reduction in PJM Locational Marginal Prices for Pepco under normal weather conditions was estimated to be 5.6 percent providing net benefits to Pepco consumers of $11.6 million annually. The price benefits for the MADRI states are estimated to be $101.9 million annually under normal weather conditions for a three percent reduction.

energy efficiency improvements or demand response. Additionally, the availability of hourly consumption data for all customers greatly improves the Company's ability to accurately estimate achieved electric energy and demand savings that result from implemented DSM programs. Pepco's recommendations regarding the near-term deployment of an advanced metering system are detailed in a separate section of this filing.

3. DSM Implementation Timeline

Pepco's implementation of its recommended DSM programs will require six to nine months of "start-up" time after Commission approval of programs for the competitive selection of program vendors, development of detailed implementation plans, and preparation of specific programmatic materials.[13] The Company proposes to phase-in the implementation of each program during the six to nine month "start-up" period. At the time Pepco programs are offered to customers, existing DDOE non-low income energy efficiency and renewables programs would be concluded. A preliminary DSM implementation timeline is presented in Exhibit 1.

Exhibit 1



4. Provision of Programs

Pepco is well positioned to provide DSM programs to its District of Columbia customers. Pepco has more than twenty years of experience in the provision of such programs directly to District of Columbia consumers. Pepco's sister company, Atlantic

[13] See Page 13, discussion of "linked rollouts."

City Electric Company ("ACE"), currently manages the provision of approximately $9 million of energy efficiency services to its New Jersey electricity customers. Historically, each of Pepco Holdings, Inc.'s electric distribution companies -- Pepco, ACE, and Delmarva have offered their customers a wide array of energy efficiency and demand response related programs, ranging from direct control peak demand reduction programs to extensive energy efficiency loan, audit, and rebate programs. These programs were subject to the oversight of the Mid-Atlantic state and District of Columbia Commissions and cost recovery surcharge mechanisms were established by each Commission as well. In the District of Columbia, Pepco achieved energy efficiency improvements in all customer segments through utility sponsored efficiency measures impacting individual end-uses and building envelopes. By 2002, Pepco achieved system-wide annualized energy efficiency savings through its historic utility sponsored energy efficiency programs in excess of 1.7 million MWh and reduced peak electricity demand by more than 350 MW. The Company's Energy Use Management Programs contributed an additional peak demand reduction in excess of 360 MW.

Pepco is well positioned to manage a renewable generation program designed to encourage the use of renewable generation by District of Columbia consumers. The Company's engineering staff is able to work closely with customers to ensure that renewable generators are connected to Pepco's electric distribution system in a manner that ensures the continued safe and reliable operation of Pepco's electric distribution system.

Pepco believes that, at this time, the District of Columbia Department of the Environment ("DDOE") should continue to develop, implement, and manage RETF programs intended to assist District of Columbia low income residents to reduce their energy costs. The Company recommends that DDOE continue to work with the RETF Working Group to design and refine its RETF funded low income programs. However, Pepco believes that it is better positioned to develop, implement, and manage energy efficiency, demand response, and renewable programs for non-low-income customers in the District of Columbia. The Company is able to perform this work more effectively for the following reasons: 1) its historic experience with the provision of extensive energy

efficiency and demand response programs; 2) its detailed customer information; 3) its extensive contact with all electric distribution customers; 4) its technical ability to design and integrate programs into electric system operations; 5) its ability to implement and manage programs; 6) its detailed accounting systems; 7) its announced plans to provide similar services in Maryland (for both Pepco and its sister utility, Delmarva Power & Light, Inc.) and in Delaware (Delmarva Power & Light, Inc.) – offering economies of scale that will reduce program costs while improving program effectiveness; 8) the Company's ability to readily adjust required staffing levels or to competitively hire contractors; and 9) its regulatory oversight by the Commission that ensures that DSM and renewable related expenditures are prudently made.

5. Regulatory Approval Process

Pepco recommends that the District of Columbia Commission establish a Pepco specific conservation collaborative whereby various electricity market stakeholders can participate in discussions regarding the appropriate design, implementation, and evaluation of Pepco sponsored DSM and renewable programs. Cost-effective DSM strategies agreed to through the collaborative process would be filed with the Commission for its review and subsequent program implementation by Pepco. As noted previously, it will be necessary for the Company to revise its DSM budget estimates after vendor bids are received and after detailed program implementation plans are developed.

Pepco proposes to develop and provide annual reports to the Commission describing its DSM and renewable program efforts. The report will contain a variety of program statistics, including detailed DSM expenditures, number of customer participants, number of measures installed, achieved annual peak electricity demand reductions, achieved annual energy savings, and any recommended significant program changes.

Pepco recommends that its proposed new utility sponsored demand response programs – residential and small commercial smart thermostat based air conditioning controls and the Company's proposed large customer internet-based demand response platform – be treated by the Commission as regulated utility business activities of Pepco.

Under this regulatory treatment, Pepco will be able to make the new capital investments necessary to support these demand response programs and to ensure the continuing availability of these programs through fluctuations in the regional PJM wholesale electricity market value of demand response.

Pepco's historic demand response programs, the residential customer Kilowatchers® Program (residential air conditioning and water heater cycling program) and Pepco's commercial customer Curtailable Load Program, were deregulated on January 1, 2001 pursuant to the Commission's approval of a settlement agreement[14] through Order No. 11845, issued on December 5, 2000. At the time the settlement agreement was reached, settlement parties anticipated that the regional electricity market would be sufficient to financially sustain the continuation and expansion of competitive demand response services within the Pepco service territory. However, due to wholesale PJM electricity capacity and energy market conditions unfavorable to demand response programs, Pepco was financially unable to sustain the operation of these programs and, as a result, suspended them effective January 1, 2005. Notably, no competitive supplier of demand response services for residential customers has emerged in the District of Columbia since January 1, 2001.

6. Evaluation Process

Pepco recommends that both monitoring and evaluation efforts be performed as part of its ongoing implementation of each program so that any program problems can be identified and corrected expeditiously. The Company plans to conduct formal program evaluations after each program has been operational for two years. The Company has included proposed budgets for this work within its overall DSM budget estimates.

7. Energy Awareness Campaign

An Energy Awareness marketing campaign is required for the successful implementation of the proposed DSM programs. The purpose of the campaign is to

[14] Non-Unanimous Agreement of Stipulation and Full Settlement Regarding Unbundled Rate Issues, filed June 30, 2000 in Formal Case No. 945, Phase II.

educate all Pepco electric distribution customers about opportunities to reduce their electricity bills through both energy efficiency and demand response and to inform them about renewable energy generating technologies. The campaign will contain information about how customers can take advantage of specific Pepco DSM programs to control their electricity costs as well as no-cost or low-cost energy savings activities customers can implement themselves. After Pepco completes the deployment of an advanced metering system, the campaign will contain information about any new electricity pricing options that are available to customers.

The recommended Energy Awareness campaign over the three year period is budgeted at $3.9 million. The proposed annual budget of program costs is presented below.

Annual District of Columbia Energy Awareness Campaign
Proposed Communications Budget

Spot Radio	$580,000
Print (newspaper)	$180,000
Cable TV	$170,000
Internet	$185,000
Print Collateral	$35,000
Special Events	$15,000
Production/Acct. Mgt.	$135,000
Total	**$1,300,000**

8. Renewable Demonstration Program

Pepco proposes to offer a renewable energy demonstration program that would fully fund the installation of a minimum of six 5 kW photovoltaic arrays on the rooftops of District of Columbia public schools or other public facilities over a three year period and to include the creation of a renewable energy curriculum for school children of different grades. The installation of each array is estimated to cost approximately $45,000 and funding would be designated to support a new curriculum is set at $50,000. The recommended annual funding level for each year for a three year period is $200,000. Any remaining funds would be available to customers to support the additional

installation of renewable generators. As noted earlier, the Company anticipates that this program would supplant the existing Renewable Energy Demonstration Program funded through the Reliable Energy Trust Fund and administered by the DDOE.

9. Proposed DSM Program Descriptions

A general description of each proposed program is presented below, together with a proposed budget for a three year implementation period. Projected annual incremental participation rates, budgets, and savings impacts are presented for each program, excluding the required program start-up design phase. As noted earlier, it is anticipated that program modifications, subject to Collaborative discussion and Commission approval, will occur during the fourth year of the program after evaluations are conducted during the third year of program implementation. Recommended measures and expenditure levels were derived from Pepco's cost-effectiveness screening and recent DSM implementation experience in other regions of the United States. Final recommended budgets are expected to vary from those presented below based upon implementation vendor bids and program refinements. Detailed implementation plans setting forth all program parameters along with accompanying program materials will be prepared during the "start-up period" prior to the implementation of each program.

Potomac Electric Power Company
Attachment
Filed April 4, 2007

Building Commissioning and Operations & Maintenance Program

Program Description
The primary objective of the Building Commissioning and O&M Program is to motivate non-residential customers to reduce energy use through improvements in the manner facilities are operated and maintained. The Program will offer technical and financial assistance to support improved commissioning of new buildings and the re-commissioning of existing facilities. The Program will also provide training opportunities, such as building operator, ENERGY STAR© Portfolio Manager, and compressed air systems operations training.
Target Market
Non-residential customers, primarily in the commercial, governmental, and institutional sectors. The target customers will typically operate large facilities, or a portfolio of smaller facilities, which are expected to be receptive to and benefit from commissioning services.
Eligible Measures
The measures allowed in the Building Commissioning and Operations and Maintenance Program will typically include consulting and engineering services and low-cost/no-cost system adjustments and control system modifications. Measures involving capital improvements will not be included in this Program, but will be supported through the Company's other recommended DSM programs. The training component of the Program will offer local or regional training opportunities to improve the energy awareness of facilities personnel. Scholarship subsidies may also be offered for other appropriate training programs.
Delivery Strategy
Program implementation will be provided by a third-party vendor who will be selected though a competitive request for proposal ("RFP") process. The selected vendor will be responsible for recruiting participants, reviewing commissioning proposals, measurement and verification plans, processing incentives (final fulfillment may be handled by the Company or a single entity for all financial assistance programs), and final measure verification. The Company will work with the selected vendor to develop a detailed implementation plan, and commissioning and technical and financial assistance guidelines. The vendor and/or the Company will also develop and offer an appropriate suite of training opportunities specifically targeted to the needs of Pepco customers. Trade allies and energy services providers will be an integral part of providing this Program to Pepco customers.

Building Commissioning and O&M Program (continued)

Marketing and Communications

The General Awareness Campaign will be the primary communications medium for the program. Program specific marketing efforts will target customers, trade allies and the energy services industry in specific market segments where commissioning and improved O&M will provide cost-effective customer benefits. The Program will be marketed to both customers and trade allies. This marketing will entail targeted direct marketing and, direct contact by vendor personnel and Company Account Managers, trade shows and trade association outreach. Trade ally marketing to customers will also be an important component of the customer marketing efforts.

Incentive Strategy

Incentives in this program generally will be based upon the cost of the consulting and engineering services necessary to carry out a commissioning plan. In a limited number of instances, the cost of a pilot list of low-cost improvements may be subsidized to demonstrate the value of additional commissioning efforts. Incentive payments will be fulfilled through credits on the customers' electric bills. Customers whose accounts are in arrears will be required to establish a payment or shared savings plan with the Company prior to receiving program incentives.

Measurement & Verification Strategy and Program Evaluation

Energy savings and cost estimates for measures in this program will be calculated by the customer or trade ally as part of the Program application process. The reasonableness of these estimates will be verified by the Program vendor using accepted engineering practices prior to an incentive being offered. Verification of completion of the commissioning process will be conducted for every project.

The program will be formally evaluated after the second full year of program implementation to serve as a basis for recommended future program changes.

Estimated Savings

Year	Customers (Buildings Impacted)	Measures (Tons of Cooling)	Peak Demand Reduction (kW)	Annual Energy Reduction (MWh)
Year 1	150	46,000	3,400	19,000
Year 2	200	60,000	4,400	24,000
Year 3	250	76,000	5,500	30,000
Total	600	182,000	13,300	73,000

Building Commissioning and O&M Program (continued)

Estimated Budget								
Year	Utility Administration	Marketing	Outside Services	Capital Equipment	Evaluation	Total Non-incentive Costs	Incentives	Total Program Cost
Year 1	$40,000	$23,000	$94,000	$0	$0	$157,000	$478,000	$635,000
Year 2	$23,000	$16,000	$109,000	$0	$0	$148,000	$620,000	$768,000
Year 3	$23,000	$8,000	$109,000	$0	$23,000	$163,000	$780,000	$943,000
Total	$86,000	$47,000	$312,000	$0	$23,000	$468,000	$1,878,000	$2,346,000

Potomac Electric Power Company
Attachment
Filed April 4, 2007

Non-Residential HVAC Efficiency Program

Program Description
The primary objective of the Non-Residential HVAC Efficiency Program is to motivate non-residential customers to select high efficiency options when making HVAC purchasing decisions by providing incentives for high efficiency unitary air conditioning and heat pump equipment. A secondary objective is to educate the marketplace on the increased efficiency and value resulting from proper HVAC system installation. To accomplish this secondary objective it is necessary to educate consumers about the value of proper system installation. It is also necessary to provide training to the HVAC industry on proper installation and commissioning techniques and selling customers on the added value of these services.
Target Market
Commercial, governmental, institutional customers of all sizes and HVAC designers, contractors and installers.
Eligible Measures
The measures selected for this program will fall into two categories: 1) high efficiency air conditioning and heat pump equipment up to approximately 30 tons of capacity, using the ENERGY STAR certification where appropriate; and 2) measures which support confirming the quality of an HVAC system installation, such as the verification of proper refrigerant charge and air-flow.
Delivery Strategy
Program implementation will be provided by a third-party vendor who will be selected though a competitive RFP process. The vendor will be responsible for recruiting participants, processing incentives (final fulfillment will be handled by the Company), and spot audit verification. The Company will work with the selected vendor to develop a detailed implementation plan, measure lists, deemed savings and rebate levels. Trade allies and energy services providers will be an integral part of bringing this program to Pepco customers.
Marketing and Communications
The General Awareness Campaign will be the primary customer communications medium for the program. Program specific marketing efforts will target contractors and trade allies in the HVAC industry. The HVAC industry will be marketed using targeted direct marketing, direct contact by the program vendor personnel, trade shows and trade association outreach. Trade ally marketing to customers will also be an important component of the customer marketing efforts.

Non-Residential HVAC Efficiency Program (continued)

Incentive Strategy

Incentives in this program will be based on the incremental costs of the energy-efficient HVAC equipment. Quality installation measure incentives will be based on the associated energy savings and a reasonable financial enticement for the HVAC industry to modify current business practices. Incentive payments will be fulfilled through credits on the customers' electric bill. Customers whose accounts are in arrears will be required to establish a payment or shared savings plan with the Company prior to receiving program incentives.

Measurement & Verification Strategy and Program Evaluation

Energy savings estimates for measures in this program will be deemed savings values based on statistical weather data and typical system operating hours in the region. All applicants will be required to provide an invoice indicating manufacturer and model numbers for the air conditioning and heat pump equipment. ARI rated efficiency will be verified for all applications. Field verification of measure installation will be made for a statistically significant sample of projects.

The program will be formally evaluated after the second full year of program implementation to serve as a basis for recommended future program changes.

Estimated Savings

Year	Customers (Units Rebated)	Measures (Tons of Cooling)	Peak Demand Reduction (kW)	Annual Energy Reduction (MWh)
Year 1	1,200	18,000	2,200	4,600
Year 2	1,535	23,000	2,900	6,000
Year 3	1,935	29,000	3,600	7,600
Total	4,670	70,000	8,700	18,200

Non-Residential HVAC Efficiency Program (continued)

Estimated Budget								
Year	Utility Administration	Marketing	Outside Services	Capital Equipment	Evaluation	Total Non-incentive Costs	Incentives	Total Program Cost
Year 1	$100,000	$60,000	$241,000	$0	$0	$401,000	$1,233,000	$1,634,000
Year 2	$60,000	$40,000	$282,000	$0	$0	$382,000	$1,590,000	$1,972,000
Year 3	$60,000	$20,000	$282,000	$0	$60,000	$422,000	$2,010,000	$2,432,000
Total	$220,000	$120,000	$805,000	$0	$60,000	$1,205,000	$4,833,000	$6,038,000

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Attachment
Filed April 4, 2007

Non-Residential Prescriptive Rebate Program

Program Description
The primary objective is to motivate non-residential customers to select high efficiency options when making purchasing decisions by providing incentives for selected common cost-effective energy efficiency measures.
Target Market
Commercial, government, and institutional customers of all sizes.
Eligible Measures
The measures selected for this program will fall into two categories: 1) measures where the energy savings can be reliably predicted by applying simple threshold conditions; and 2) measures where a uniform incentive structure is appropriate, but a simple energy savings estimate is necessary to qualify the specific application. The measures will range from energy-efficient equipment which has broad application in the commercial and industrial sectors, such as premium efficiency motors and variable frequency drives on HVAC systems, to niche market applications such as T5 lighting conversions in the big-box retail sector. LED traffic signals will be included.
Delivery Strategy
Program implementation will be provided by a third-party vendor who will be selected though a competitive RFP process. The vendor will be responsible for recruiting participants, processing incentives (final fulfillment may be handled by the Company), and spot audit verification. The Company will work with the selected vendor to develop a detailed implementation plan, measure lists and rebate levels. Trade allies and energy services providers will be an integral part of bringing this program to Pepco customers.
Marketing and Communications
The General Awareness Campaign will be the primary communications medium for the program. Program specific marketing efforts will target customers, trade allies and the energy services industry for specific market segments where the prescriptive rebate measures are applicable. Customer marketing will entail targeted direct marketing, direct contact by Company Account Managers and program implementer personnel, trade shows and trade association outreach. Trade ally marketing will also be an important component of the customer marketing efforts.

Non-Residential Prescriptive Rebate Program (continued)

Incentive Strategy

Incentives in this program generally will be based on the incremental costs of the energy-efficient equipment and measures, with consideration given to current levels of equipment market share. Incentive payments may be fulfilled through credits on the customers' electric bill. Customers whose accounts are in arrears will be required to establish a payment or shared savings plan with the Company prior to receiving program incentives.

Measurement & Verification Strategy and Program Evaluation

Energy savings estimates for measures in this program will be deemed savings values established for each measure. Verification of measure installation will be made for a statistically significant sample of projects.

The program will be formally evaluated after the second full year of program implementation to serve as a basis for recommended future program changes.

Estimated Savings

Year	Customers	Measures (Lamps, Fixtures, Motors, etc.)	Peak Demand Reduction (kW)	Annual Energy Reduction (MWh)
Year 1	310	34,000	700	5,000
Year 2	410	44,000	1,000	7,000
Year 3	610	55,000	1,200	9,000
Total	1,330	133,000	2,900	21,000

Estimated Budget

Year	Utility Administration	Marketing	Outside Services	Capital Equipment	Evaluation	Total Non-incentive Costs	Incentives	Total Program Cost
Year 1	$20,000	$10,000	$39,000	$0	$0	$69,000	$200,000	$269,000
Year 2	$10,000	$7,000	$46,000	$0	$0	$63,000	$260,000	$323,000
Year 3	$10,000	$3,000	$46,000	$0	$10,000	$69,000	$330,000	$399,000
Total	$40,000	$20,000	$131,000	$0	$10,000	$201,000	$790,000	$991,000

Potomac Electric Power Company
Attachment
Filed April 4, 2007

Custom Incentive Program

Program Description
The primary objective of the Custom Incentive Program is to motivate non-residential customers to select high efficiency options when making purchasing decisions by providing technical assistance and financial incentives for cost-effective energy efficiency measures which are customized to the specific needs of the customer.
Target Market
Commercial, government, and institutional customers of all sizes.
Eligible Measures
The measures permitted in the Custom Incentive Program are any cost-effective non-lighting energy efficiency improvements that are not eligible for rebates through the Company's other non-residential DSM programs. These measures will typically have energy savings and incremental costs that are site specific and not applicable across a broad range of customers. Measures are expected to include large air conditioning equipment and chillers, industrial process improvements, energy management systems, and improvements which improve the efficiency of an energy consuming system rather than a single piece of equipment. Efficiency improvements that are derived solely from operational changes are specifically excluded from this program and will be eligible to participate in the Building Commissioning and Operations and Maintenance Program.
Delivery Strategy
Program implementation will be provided by a third-party vendor who will be selected though a competitive RFP process. The implementer will be responsible for recruiting participants, verifying energy savings and cost proposals, processing incentives (final fulfillment will be handled by the Company), and measure verification. The Company will work with the selected vendor to develop a detailed implementation plan, measure lists and incentive guidelines. Trade allies and energy services providers will be an integral part of bringing this program to Pepco customers.
Marketing and Communications
The General Awareness Campaign will be the primary communications medium for the program. Program specific marketing efforts will target customers, trade allies and the energy services industry for specific market segments where custom measures are applicable. The Custom Incentive Program will be marketed to both customers and trade allies. This marketing will entail targeted direct marketing and, direct contact by vendor personnel and Company Account Managers, trade shows and trade association outreach. Trade ally marketing to customers will also be an important component of marketing.

Custom Incentive Program (continued)

Incentive Strategy

Incentives in this program will be based on the incremental costs of the energy-efficient equipment and measures, with consideration given to the customer's current energy efficiency practices in developing project baselines. Incentive payments may be fulfilled through direct payments to the customer or credits on the customer's electric bill. Customers whose accounts are in arrears will be required to establish a payment or shared savings plan with the Company prior to receiving program incentives.

Measurement & Verification Strategy and Program Evaluation

Energy savings and cost estimates for measures in this program will be calculated by the customer or trade ally as part of the Program application process. The reasonableness of these estimates will be verified by the Program vendor, using accepted engineering practices, prior to an incentive being offered. Verification of measure installation will be made for every project with an incentive of $25,000 or more and for a statistically significant sample of smaller projects.

The program will be formally evaluated after the second full year of program implementation to serve as a basis for recommended future program changes.

Estimated Savings

Year	Customers	Measures (Tons of cooling, control points, etc.)	Peak Demand Reduction (kW)	Annual Energy Reduction (MWh)
Year 1	1,200	697,000	8,000	14,300
Year 2	1,500	896,000	10,300	18,400
Year 3	1,900	1,134,000	13,100	23,300
Total	4,600	2,727,000	31,400	56,000

Custom Incentive Program (continued)

Estimated Budget								
Year	Utility Administration	Marketing	Outside Services	Capital Equipment	Evaluation	Total Non-incentive Costs	Incentives	Total Program Cost
Year 1	$80,000	$49,000	$197,000	$0	$0	$326,000	$1,004,000	$1,330,000
Year 2	$49,000	$33,000	$229,000	$0	$0	$311,000	$1,290,000	$1,601,000
Year 3	$49,000	$16,000	$229,000	$0	$49,000	$343,000	$1,640,000	$1,983,000
Total	$178,000	$98,000	$655,000	$0	$49,000	$980,000	$3,934,000	$4,914,000

Non-Residential Smart Thermostat Program

Program Description
The primary objective of the Smart Stat Load Control Program is to provide a simple method for non-residential consumers with central air conditioning or heat pump systems to automatically reduce peak electricity demand during peak usage periods and to also reduce their overall electricity consumption. The program will accomplish this goal through the installation of remotely controllable smart thermostats capable of reducing the air conditioners load on the electric system after receipt of a Pepco command signal and capable of being programmed to automatically vary temperature settings. There are several control methods and technologies available to the Company for application in this program. The Company will select the final technology together with an advanced metering system as part of a competitive RFP process.
Target Market
Small commercial, government, and institutional customers with packaged central air conditioning systems.
Eligible Measures
The selected remotely controllable thermostat(s) will reduce air conditioning electric load in response to a utility command to do so.
Delivery Strategy
Program implementation will be provided by a third-party vendor who will be selected though an RFP process. The vendor will be responsible for supplying, installing and maintaining smart thermostats, and recruiting participants. Pepco will verify load reductions and provide market based incentives through the deployment of an advanced metering system. The Company will work with the selected vendor to develop a detailed implementation plan. Any delay in the deployment of a smart metering system will delay the implementation of this Program.
Marketing and Communications
The General Awareness Campaign will be the primary customer communications medium for the program. Program specific marketing efforts will target customers with central air conditioning systems. This marketing will entail targeted direct marketing and, direct contact by vendor personnel and Company Account Managers.
Incentive Strategy
All program incentives will be based upon the PJM wholesale market value of reductions.

Non-Residential Smart Thermostat Program (continued)

Measurement & Verification Strategy and Program Evaluation

Achieved electric energy and demand reductions will be determined through hourly energy consumption data obtained through deployment of an advanced metering system and each customer's historic billing data, adjusted for weather conditions.

The program will be formally evaluated after the second full year of program implementation to serve as a basis for recommended future program changes.

Estimated Savings

Year	Customers (A/C Units Controlled)	Measures (Tons of Cooling)	Peak Demand Reduction (kW)	Annual Energy Reduction (MWh)
Year 1	0	0	0	0
Year 2	500	12,000	3,500	100
Year 3	3,000	75,000	16,400	400
Total	3,500	87,000	19,900	500

Estimated Budget

Year	Utility Administration	Marketing	Outside Services	Capital Equipment	Evaluation	Total Non-incentive Costs	Incentives	Total Program Cost
Year 1	$60,000	$27,000	$90,000	$0	$0	$177,000	Mkt.	$177,000
Year 2	$45,000	$15,000	$110,000	$150,000	$0	$320,000	Mkt.	$320,000
Year 3	$45,000	$9,000	$110,000	$948,000	$27,000	$1,139,000	Mkt.	$1,139,000
Total	$150,000	$51,000	$310,000	$1,098,000	$27,000	$1,636,000	Mkt.	$1,636,000

Potomac Electric Power Company
Attachment
Filed April 4, 2007

Non-Residential Internet Platform for Load Curtailments

Program Description
The primary objective of the Non-Residential Internet Platform for Load Curtailments is to motivate non-residential consumers to participate in PJM load response programs by providing a convenient mechanism to do so. Customers who participate will receive hourly customer energy data (daily or monthly depending upon existing metering), hourly Pepco Zonal Locational Marginal Prices (LMPs) for energy, and load reduction calculations (hourly energy savings) presented through the Internet platform. Pepco deployment of an advanced metering system will provide daily data for customer participants in this important program.
Target Market
Commercial, government, and institutional customers capable of reducing their demands by at least 100 kW during summer weekday afternoons.
Eligible Measures
Participants will reduce demand and energy consumption when LMPs are high enough for them to justify doing so, or when PJM calls for an emergency load reduction.
Delivery Strategy
An internet demand response platform will be selected through a competitive RFP process and will be linked to Pepco's internet home page. If a similar proposal is adopted by other PHI regions, program capital costs will be reduced due to a sharing of costs across jurisdictions.
Marketing and Communications
The General Awareness Campaign will be the primary communications medium for the program. Program specific marketing efforts will target eligible customers, trade allies and load serving entities. Customer marketing will entail targeted direct marketing, direct contact by Company Account Managers, trade shows and trade association outreach.

Non-Residential Internet Platform for Load Curtailments (continued)

Incentive Strategy

The incentives in this program will be the PJM Load Response payments for energy reductions and will be based upon the hourly PJM LMPs and the load reductions achieved. Customers who participate through Pepco will receive 70% of the PJM payments, with the other 30% retained by Pepco to offset DSM program costs. Payments to customers participating through Pepco will appear as credits on the customer's electric bill. Participants will have the option at any time to exit this Program and participate in any PJM demand reduction program through a competitive Curtailment Service Provider or directly with PJM.

Measurement & Verification Strategy and Program Evaluation

Achieved electric energy and demand reductions will be determined through hourly energy consumption data, obtained through existing interval meters and future deployment of an advanced metering system and each customer's historic billing data, adjusted for weather conditions.

The program will be formally evaluated after the second full year of program implementation to serve as a basis for recommended future program changes.

Estimated Savings

Year	Customers	Measures (Lamps, Fixtures, Motors, etc.)	Peak Demand Reduction (kW)	Annual Energy Reduction (MWh)
Year 1	50	N/A	5,000	50
Year 2	25	N/A	2,500	25
Year 3	25	N/A	2,500	25
Total	100	N/A	10,000	100

Non-Residential Internet Platform for Load Curtailments (continued)

Estimated Budget								
Year	Utility Administration	Marketing	Outside Services	Capital Equipment	Evaluation	Total Non-incentive Costs	Incentives	Total Program Cost
Year 1	$30,000	$40,000	$25,000	$170,000	$0	$265,000	Mkt.	$265,000
Year 2	$20,000	$20,000	$25,000	$ 0	$0	$65,000	Mkt.	$65,000
Year 3	$20,000	$20,000	$25,000	$ 0	$12,000	$77,000	Mkt.	$77,000
Total	$70,000	$80,000	$75,000	$170,000	$12,000	$407,000	Mkt.	$407,000

Potomac Electric Power Company
Attachment
Filed April 4, 2007

Home Performance with ENERGY STAR Program

Program Description
The primary objective of the Home Performance with ENERGY STAR Program is to motivate residential energy consumers to use a whole-house approach to reducing energy consumption when considering home improvements such as new heating and air conditioning equipment, replacing windows, or adding insulation. Rather than focusing on a single component, the homeowner will be provided with an assessment of how a combination of improvements, such as sealing air and duct leaks, adding insulation, improving the HVAC system and upgrading lighting and appliances would result in a more comfortable home, with lower electricity consumption. A secondary objective is to develop a trained and certified group of contractors capable of providing whole-house energy services in the Pepco market. HVAC, insulation, and home improvement contractors will be offered training opportunities and encouraged to become quality certified by organizations such as the Building Performance Institute ("BPI") and the National Association for Technical Excellence ("NATE").
Target Market
Residential customers in existing homes who are considering upgrades and improvements to their home.
Eligible Measures
Eligible measures in this program will include air sealing, additional insulation, duct sealing, recommended new heating and air conditioning equipment, and recommended energy-efficient lighting and appliances. Air conditioning and lighting related rebates will be provided through separate programs described below. Contractor training to support quality certification will also be offered.
Delivery Strategy
Program implementation will be provided by a third-party vendor who will be selected though a competitive RFP process. The vendor will be responsible for recruiting and training contractors, processing incentives (final fulfillment may be handled by the Company), and spot audit verification. This program will leverage the Home Energy Rating System ("HERS") Rating and contractor infrastructure developed by the existing RETF HERS Program. The Company will work with the selected vendor to develop a detailed implementation plan, measure lists, deemed savings and rebate levels. Trained and certified contractors will be an integral part of bringing this program to Pepco customers.

Home Performance with ENERGY STAR Program (continued)

Marketing and Communications

The General Awareness Campaign will be the primary customer communications medium for the program. Program specific marketing efforts will target contractors and trade allies in the HVAC and home improvement industries. These industries will be marketed using targeted direct marketing, direct contact by the program vendor personnel, trade shows and trade association outreach. Trade ally marketing to their customers will also be an important component of the customer marketing efforts.

Incentive Strategy

Incentives in this program will be in the form of direct incentives for energy efficiency improvements and energy efficiency improvement loans. These energy efficiency loans may be interest rate subsidized by the program or arranged through a lender affiliated with a program such as the Fannie Mae Energy Efficiency Loan Program. (Any energy efficiency loans will be managed by the lending institution.)

Measurement & Verification Strategy and Program Evaluation

Energy savings estimates for projects in this program will be available from the software programs used by the contractors to evaluate customer's homes. Contractors will be required to upload data to a central database to acquire the savings information. Field verification of measure installation will be made for a statistically significant sample of projects.

The program will be formally evaluated after the second full year of program implementation to serve as a basis for recommended future program changes.

Estimated Savings

Year	Customers	Measures (Homes)	Peak Demand Reduction (kW)	Annual Energy Reduction (MWh)
Year 1	1,000	1,000	1,100	2,000
Year 2	1,300	1,300	1,500	3,000
Year 3	1,700	1,700	1,900	4,000
Total	4,000	4,000	4,500	9,000

Home Performance with ENERGY STAR Program (continued)

Estimated Budget								
Year	Utility Administration	Marketing	Outside Services	Capital Equipment	Evaluation	Total Non-incentive Costs	Incentives	Total Program Cost
Year 1	$100,000	$60,000	$250,000	$0	$0	$410,000	$1,130,000	$1,540,000
Year 2	$60,000	$40,000	$290,000	$0	$0	$390,000	$1,450,000	$1,840,000
Year 3	$60,000	$20,000	$290,000	$0	$60,000	$430,000	$1,840,000	$2,270,000
Total	$220,000	$120,000	$830,000	$0	$60,000	$1,230,000	$4,420,000	$5,650,000

Residential HVAC Efficiency Program

Program Description
The primary objective of the residential HVAC Efficiency Program is to motivate residential energy consumers to select high efficiency options when making HVAC purchasing decisions by providing rebates for high efficiency unitary air conditioning and heat pump equipment. A secondary objective is to educate the marketplace about the increased efficiency and improved comfort resulting from proper HVAC system installation. To accomplish this secondary objective it is necessary to educate consumers on the value of proper system installation. It is also necessary to provide impetus and training to the HVAC industry on proper installation and commissioning techniques and selling customers on the added value of these services.
Target Market
Residential customers who are purchasing central air conditioning and heat pump systems and HVAC designers, contractors and installers.
Eligible Measures
The measures selected for this Program will fall into two categories: 1) ENERGY STAR© qualified high efficiency central and packaged terminal unit air conditioning and heat pump equipment that exceed existing code requirements up to approximately 5 ton capacity; and 2) measures which support confirming the quality of an HVAC system installation, such as the verification of proper refrigerant charge and air-flow.
Delivery Strategy
Program implementation will be provided by a third-party vendor who will be competitively selected though an RFP process. The vendor will be responsible for recruiting participants, processing incentives (final fulfillment will be handled by the Company), and spot audit verification. The Company will work with the selected vendor to develop a detailed implementation plan, measure lists, deemed savings and rebate levels. Trade allies and energy services providers will be an integral part of bringing this program to Pepco customers.
Marketing and Communications
The General Awareness Campaign will be the primary customer communications medium for the program. Program specific marketing efforts will target contractors and trade allies in the HVAC industry. The HVAC industry will be marketed using targeted direct marketing, direct contact by the program vendor personnel, trade shows and trade association outreach. Trade ally marketing to customers will also be an important component of the customer marketing efforts.

Residential HVAC Efficiency Program (continued)

Incentive Strategy

Incentives in this program generally will be based on a portion of the incremental costs of the energy-efficient HVAC equipment. Quality installation measure incentives will be based on the associated energy savings and a reasonable financial enticement for the HVAC industry to modify current business practices. Incentive payments may be fulfilled through credits on the customers' electric bills. Customers whose accounts are in arrears will be required to establish a payment or shared savings plan with the Company prior to receiving program incentives.

Measurement & Verification Strategy and Program Evaluation

Energy savings estimates for measures in this program will be deemed savings values based on statistical weather data and typical system operating hours in the region. All applicants will be required to provide an invoice indicating manufacturer and model numbers for the air conditioning and heat pump equipment. ARI rated efficiency will be verified for all applications. Field verification of measure installation will be made for a statistically significant sample of projects.

The program will be formally evaluated after the second full year of program implementation to serve as a basis for recommended future program changes.

Estimated Savings

Year	Customers	Measures (Systems)	Peak Demand Reduction (kW)	Annual Energy Reduction (MWh)
Year 1	1,000	1,000	300	400
Year 2	1,000	1,000	300	500
Year 3	1,000	1,000	400	700
Total	3,000	3,000	1,000	1,600

Residential HVAC Efficiency Program (continued)

Estimated Budget								
Year	Utility Administration	Marketing	Outside Services	Capital Equipment	Evaluation	Total Non-incentive Costs	Incentives	Total Program Cost
Year 1	$10,000	$8,000	$32,000	$0	$0	$50,000	$170,000	$220,000
Year 2	$8,000	$5,000	$37,000	$0	$0	$50,000	$210,000	$260,000
Year 3	$8,000	$4,000	$38,000	$0	$10,000	$60,000	$270,000	$330,000
Total	$26,000	$17,000	$107,000	$0	$10,000	$160,000	$650,000	$810,000

Residential Lighting and Appliance Program

Program Description
The objective of the Residential Lighting and Appliance Program is to increase the presence of ENERGY STAR© lighting and window air conditioning products in residences. The Program will employ consumer coupons and rebates and/or middle-market buy-downs to overcome the relatively high first-cost and customer unfamiliarity that prevents consumers from purchasing efficient lighting products. In many U.S. markets, the buy-down methodology has proven to be the most effective way to influence the market, from both program cost and success standpoints.
Target Market
All residential customers.
Eligible Measures
Eligible measures in this program will include ENERGY STAR© qualified compact fluorescent light bulbs, fluorescent lighting fixtures, ceiling fans with fluorescent light fixtures, and window air conditioners. ENERGY STAR appliances such as refrigerators, clothes washers and dishwashers were examined during the planning process and found to have ART cost-effective ratios of 0.53 and lower; therefore incentives to encourage the purchase of these appliances are not included within this proposed program.
Delivery Strategy
Program implementation will be provided by a third-party vendor who will be selected though a competitive RFP process. The vendor will be responsible for program implementation, retailer interactions, processing incentives (final incentive fulfillment will be handled by the Company), and spot audit verification. The Company will work with the selected vendor to develop a detailed implementation plan, measure lists, deemed savings and rebate levels.
Marketing and Communications
The General Awareness Campaign will be the primary customer communications medium for the Program. Program specific marketing efforts will target retailers to increase the availability of ENERGY STAR© lighting and window air conditioning products in the marketplace.
Incentive Strategy
Incentives in this program will be in the form of consumer coupons, rebates, and buy-downs of product cost at the retailer level.

Residential Lighting and Appliance Program (continued)

Measurement & Verification Strategy and Program Evaluation

Energy savings estimates for residential lighting will be based on engineering calculated savings and customer installation rates.

The program will be evaluated after the second full year of program implementation to inform a decision on continuation or modification of the program.

Estimated Savings

Year	Customers	Measures (CFLs and Fixtures)	Peak Demand Reduction (kW)	Annual Energy Reduction (MWh)
Year 1	9,800	59,000	1,400	3,700
Year 2	12,700	76,000	1,800	4,700
Year 3	16,000	96,000	2,200	6,000
Total	38,500	231,000	5,400	14,400

Estimated Budget

Year	Utility Administration	Marketing	Outside Services	Capital Equipment	Evaluation	Total Non-incentive Costs	Incentives	Total Program Cost
Year 1	$8,000	$5,000	$17,000	$0	$0	$30,000	$130,000	$160,000
Year 2	$6,000	$4,000	$30,000	$0	$0	$40,000	$170,000	$210,000
Year 3	$8,000	$3,000	$41,000	$0	$8,000	$60,000	$210,000	$270,000
Total	$22,000	$12,000	$88,000	$0	$8,000	$130,000	$510,000	$640,000

Potomac Electric Power Company
Attachment
Filed April 4, 2007

Residential Smart Thermostat Program

Program Description
The primary objective of the Residential Smart Thermostat Program is to provide a simple method for residential consumers with central air conditioning or heat pump systems to automatically reduce peak electricity demand during peak usage periods and to also reduce their overall electricity consumption. The program will accomplish this goal through the installation of remotely controllable smart thermostats, capable of reducing the air conditioner load on the electric system after receipt of a Pepco command signal and capable of being programmed to automatically vary temperature settings. There are several control methods and technologies available to the Company for application in this program. The Company will select the final technology together with an advanced metering system as part of a competitive RFP process.
Target Market
Residential customers with central air conditioning or heat pumps. Market penetration rates are expected to increase to 25 percent of all residential customers with central air conditioning or central heat pump systems over a ten year period based upon the Company's prior experience with the Kilowatchers Club Program. An increase of this magnitude will similarly increase Pepco's future capital expenditures for the program.
Eligible Measures
The selected remotely controllable thermostat(s) will reduce air conditioning electric load in response to a utility command to do so.
Delivery Strategy
Program implementation will be provided by a third-party vendor who will be selected though an RFP process. The vendor will be responsible for supplying, installing and maintaining smart thermostats, and recruiting participants. Pepco will verify load reductions and provide market based incentives through the deployment of an advanced metering system. The Company will work with the selected vendor to develop a detailed implementation plan. Any delay in the deployment of a smart metering system will delay the implementation of this Program.
Marketing and Communications
The General Awareness Campaign will be the primary customer communications medium for the program. Program specific marketing efforts will target customers with central air conditioning systems. This marketing will entail targeted direct marketing.

Residential Smart Thermostat Program (continued)

Incentive Strategy

All program incentives will be based upon the PJM wholesale market value of load reductions.

Measurement & Verification Strategy and Program Evaluation

Achieved electric energy and demand reductions will be determined through hourly energy consumption data obtained through deployment of an advanced metering system and each customer's historic billing data adjusted for weather conditions.

The program will be formally evaluated after the second full year of program implementation to serve as a basis for recommended future program changes.

Estimated Savings

Year	Customers	Measures (Homes controlled)	Peak Demand Reduction (kW)	Annual Energy Reduction (MWh)
Year 1	0	0	0	0
Year 2	1,000	1,000	1,000	500
Year 3	6,000	6,000	6,000	3,000
Total	7,000	7,000	7,000	3,500

Estimated Budget

Year	Utility Administration	Marketing	Outside Services	Capital Equipment	Evaluation	Total Non-incentive Costs	Incentives	Total Program Cost
Year 1	$50,000	$19,000	$64,000	$0	$0	$133,000	Mkt.	$133,000
Year 2	$32,000	$13,000	$77,000	$320,000	$0	$442,000	Mkt.	$442,000
Year 3	$32,000	$6,000	$77,000	$1,900,000	$19,000	$2,034,000	Mkt.	$2,034,000
Total	$114,000	$38,000	$218,000	$2,220,000	$19,000	$2,609,000	Mkt.	$2,609,000

Potomac Electric Power Company
Attachment
Filed April 4, 2007

PEPCO'S BLUEPRINT FOR THE FUTURE PLAN

ADVANCED METERING INFRASTRUCTURE (AMI) DEPLOYMENT

II. ADVANCED METERING AND RELATED TECHNOLOGY

Pepco plans to deploy an advanced metering infrastructure[15] ("AMI") and the associated meter data management system ("MDMS") for all of its District of Columbia electric customers as part of an overall Pepco Holdings, Inc. ("PHI")[16] AMI deployment plan to better serve its electric and gas distribution customers. Pepco submitted a similar plan to the Maryland Commission on March 21, 2007 that will result in the installation of AMI equipment for all Pepco Maryland electric distribution customers. Pepco's sister utility, Delmarva, submitted a similar plan to the Delaware Commission on February 6, 2007 and to the Maryland Commission on March 21, 2007 that will result in the installation of AMI equipment for all of Delmarva's Maryland and Delaware electric distribution customers and Delmarva's Delaware gas distribution customers. Pepco recognizes that the costs of such a deployment are significant; however, the resulting benefits to Pepco's District of Columbia electric customers will greatly exceed those costs.

Due to the magnitude, complexity, and importance of this project, Pepco recommends that the Commission establish a Pepco AMI Advisory Group comprised of representatives of Pepco, the Commission Staff, the Office of the People's Counsel, and any other parties the Commission deems appropriate. Pepco will share its AMI project plans with the Advisory Group and provide a copy of its detailed AMI project plan to the Commission. Advisory Group members will be invited to participate in vendor presentations and the review of proposals; however, Pepco's technical staff will be

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[15] Pepco agrees with the electric AMI system definition developed by the Federal Energy Regulatory Commission Staff:

> Advanced metering is a metering system that records customer consumption [and possibly other parameters] hourly or more frequently and that provides for daily or more frequent transmittal of measurements over a communication network to a central collection point. (Federal Energy Regulatory Commission Staff Report entitled "Assessment of Demand Response & Advanced Metering," August 2006, p. 17.)

[16] PHI is the holding company of the Atlantic City Electric Company, the Delmarva Power & Light Company, and the Potomac Electric Power Company. Collectively these companies deliver electricity to customers in New Jersey, Delaware, Maryland, the District of Columbia, and Virginia. In addition, Delmarva delivers natural gas to customers in Delaware.

responsible for the evaluation, vendor negotiations, and final vendor selection. After vendor selections are made, Pepco will share its detailed implementation plan and refined project cost estimates with the Advisory Group. The detailed implementation plan will also be shared with the Commission.

Due to the significant utility costs expected to be incurred, Pepco recommends that the Commission establish an AMI specific cost recovery mechanism in the near-term. Approval of the proposed cost recovery mechanism will permit the Company to recover its prudently incurred AMI capital expenditures over an appropriate time period that is fair to both District of Columbia customers and PHI shareholders. Pepco also recommends that the Commission approve the Company's Bill Stabilization Adjustment ("BSA") mechanism that is contained in Pepco's current District of Columbia electric distribution base rate filing (Case No. 1053). Commission approval of the BSA in that proceeding will help to remove existing utility financial disincentives related to the Company's installation of AMI supported demand response enabling technology and the implementation of AMI supported optional time differentiated electricity pricing signals. A more detailed discussion of the proposed cost recovery mechanisms is contained in the record in Case No. 1053, as well as in the cost recovery section of this filing.

The significant benefits of AMI deployment have recently been recognized by other utilities and state regulatory commissions. Pennsylvania Power & Light Company completed the installation of 1.3 million electric meters in 2004 for all of its electric distribution customers. Southern Company (4.5 million electric meters) and Detroit Edison (3 million electric meters) have received Commission approval to replace all of their meters with an AMI system and are currently in the vendor RFP phase of this work. The Pacific Gas & Electric Company has received California Commission approval for universal deployment of an AMI system and is currently deploying 5.2 million electric meters and 4.1 million gas meters. Southern California Edison Company (5.1 million electric meters for an estimated cost of $1.3 billion) submitted a filing on December 21, 2006 to the California Commission proposing to initiate AMI pre-deployment activities leading to full deployment beginning in early 2008. San Diego Gas & Electric Company has agreed to revise its AMI deployment plan for all of its customers (1.3 million electric

meters and 800,000 gas meters) and is awaiting approval of a settlement agreement. On January 23, 2006, the Baltimore Gas & Electric Company filed with the Maryland Commission for approval of the deployment of an AMI system beginning in 2007.

Pepco is currently working with the Smart Meter Pilot Program, Inc. to implement a smart metering pilot program in the District of Columbia during 2007. This pilot was initiated as the result of the Pepco/Conectiv merger settlement agreement, whereby the Company agreed to contribute $2 million towards a smart metering pilot initiative. The pilot is designed to test residential customer response to three rate options based upon Pepco Zonal day-ahead PJM Locational Marginal Prices: 1) hourly pricing, 2) critical peak pricing, and 3) critical peak rebates. A portion of pilot program participants will receive a smart thermostat to help them to reduce their summer air conditioning load during high priced periods. The purpose of the District of Columbia pilot is to test customer response to different rate options and billing statements rather than to test any AMI or smart thermostat technology. The results gathered from the study will be used by Pepco to develop appropriate rate options for customers that will be supported by the Company's universal AMI deployment plan.

It is now time to deploy an AMI system in the District of Columbia for the following reasons: 1) the cost of electricity has risen significantly in recent years thereby greatly increasing the need for detailed consumption data for all Pepco District of Columbia electricity customers; 2) near-term AMI deployment will provide significant Pepco District of Columbia electricity customer benefits; 3) AMI equipment is currently available from vendors at a reasonable cost, but availability may become more limited in the future as additional utility AMI deployments are initiated; and 4) metering technology has evolved sufficiently to make this practicable.

On July 31, 2006, the Commission issued Order No. 14016 establishing Case No. 1049 and soliciting stakeholder comments on whether additional Commission action was required to comply with any aspects of the Act. Pepco filed its comments on August 30, 2006, and noted that no additional activities were required by the Commission at this time. In the Company's Reply Comments filed on September 14, 2006, Pepco noted that Commission establishment of a Working Group would be one method of addressing the

Act's smart metering requirements. On March 23, 2007, the Commission issued Order No. 14239 establishing an Advanced Metering Working Group. The Order requires the Working Group to submit a report regarding the appropriateness of implementing a smart metering program in the District of Columbia and to provide that report to the Commission within ninety days. In this filing Pepco has announced its plans to install advanced meters for all District of Columbia electricity customers, therefore the Company recommends that the Commission established Advanced Metering Working Group be revised to serve as an AMI Advisory Group to Pepco. Due to the complexity of the design of an AMI system for the District of Columbia, Pepco recommends that an initial AMI Advisory Group report to the Commission be submitted within 180 days rather than 90 days.

1. AMI Infrastructure

The Company intends to implement an AMI system and the associated MDMS for all of its District of Columbia electric customers as part of an overall PHI-wide deployment beginning with the planning phase during 2007. The Company's adoption of this approach is based upon its recent completion of a multi-year effort to examine the technical and operational aspects of AMI systems, further development of AMI technology and supporting systems, and the increasing benefits associated with providing District of Columbia consumers with additional information about their electricity consumption in order to help to manage energy bills.

The near-term tasks for Pepco's District of Columbia AMI project include the following:

- Assess Customer/Utility Requirements
- Establish Recommended Systems Capabilities
- Review Available Technology and Communications Systems
- Participate in Vendor Pepco RFP Development
- Develop Detailed Project Plan
- Identify Project Risks

- Review Vendor Proposals[17]
- Refine Project Cost Estimates[18]
- Prepare Detailed Pepco District of Columbia AMI Implementation Plan

2. AMI Project Timeline

PHI is developing an AMI implementation timeline applicable for all of its electric distribution companies that will result in completion of all AMI meter installations within a five year time period after project start.[19] Pepco District of Columbia AMI meter installations are expected to begin approximately eighteen to twenty-four months after project start. PHI will optimize the installation of AMI equipment in a manner that helps to minimize capital and labor related installation costs and that is achievable with the expected availability of required labor and AMI equipment. Pepco anticipates that as AMI metering equipment is installed some of the benefits related to AMI will be available to each customer that receives the new metering equipment.

3. AMI Implementation Cost

The Company estimates that a universal deployment of AMI for all of its 256,357 District of Columbia electric distribution meters will be approximately $60 million, depending upon system capability and configuration. The major components of this cost include new smart meters with household communication links, communication equipment and the build out of the local area network ("LAN") and the wide-area network ("WAN"), and supporting software systems. It is important to recognize that

[17]Advisory Group members will be invited to participate in vendor presentations and the review of proposals; however, Pepco's technical staff will be responsible for the evaluation, vendor negotiations, and final vendor selection. The Company will present the rationale for this selection to the members of the advisory group.

[18] Final project cost estimates will be available after vendor selection and negotiations have been completed.

[19] A limited number of meters may require additional installation time due to access or location problems.

Pepco will not be able to provide refined project cost estimates until vendor selection and contract negotiations have been completed. The purchase and installation of a meter data management system ("MDMS") will also be required to process the significant quantities of meter data collected through the AMI system. Based upon full PHI AMI implementation, the Pepco District of Columbia allocated cost for the MDMS is approximately $1.2 million.[20] Potential additional expenses that are not included would be incurred for interfaces to Control Center outage management software, upgrades to the utility settlement system, future customer information system upgrades or replacement, customer educational materials, utility personnel training, and any deployed demand response technology.

Pepco's demand-side management program proposals contained in this filing include preliminary cost estimates for the installation of remotely controllable programmable thermostats for residential and small commercial customers. These smart thermostats will permit Pepco to replace its pre-existing Kilowatchers Program with state of the art technology designed to reduce residential and small commercial customer air conditioning load during periods of high electricity demand. The smart thermostats will serve as an easy mechanism for customers to control both their overall electric cooling and gas or electric heating costs.

4. AMI Communication Technology

The primary component of an AMI System is the communication system. At this time, five alternative communication methods exist: power line carrier, broadband over power line, fixed radio, and systems using cellular and/or landlines. Under power line carrier, data pass through the electric distribution network and are gathered at electric distribution substations for transmittal back to the utility. Broadband over power line ("BPL") permits an even greater quantity of digital data to be passed through the electric distribution network; however the data are effectively blocked by distribution

[20] The total cost of a MDMS system is estimated to be $10 million. Ultimately, Pepco proposes to spread this cost across all of the Pepco Holdings, Inc. electric distribution companies and the jurisdictions that adopt the Blueprint for the Future.

transformers necessitating the installation of additional equipment to bypass each transformer. BPL also offers the ability to provide high speed internet access, cable television, and telephone communications. BPL systems are more expensive to install than other AMI communication systems due to the additional required equipment. Pepco has participated in a BPL test in Montgomery County, Maryland for several years.

Radio based systems directly communicate with individual meters. Mesh systems permit meters that are unable to directly communicate with the radio tower due to insufficient signal strength, to communicate with nearby meters that have the capability of passing data to the towers. Alternative radio communication techniques for difficult to communicate with meters include the installation of additional antenna or special data collectors that have the capability of communicating with the towers. (A radio communication system has been selected for the advanced meter pilot program in the District of Columbia.) Cellular or landline systems typically rely on available communication networks established by cellular telephone companies and hard-wired telephone systems. The limitations of these systems include monthly access fee expense, rapidly changing cellular communication protocols, and cellular service coverage limitations. (Pepco has piloted a hybrid Cellnet AMI System since 2005 in order to evaluate the capabilities of this communication system for the purposes of outage detection, AMI, and distribution automation.) Any deployment of advanced metering infrastructure could include one or more of these communication systems.

The Company plans to deploy a two-way AMI system versus a one-way system due to the numerous operational advantages of doing so. The advantages of two-way communications include the following capabilities to support advanced applications related to: remote turn on/off, the ability to send price signals directly to customers, the ability to verify power outages and restoration, and the ability to verify directly connected demand response enabling technology.

Pepco will improve the Company's communications network to accommodate the increased flow of customer and distribution system data to and from Pepco's operational centers. A fixed communications network provides the most robust and secure communications platform for AMI and Distribution Automation (DA). This network

would take information to Pepco's substations; from there it would travel over a private fiber network to Pepco's main offices. All of Pepco's transmission substations are currently served by fiber and the Company has plans to install fiber at its distribution substations as well. It is important to leverage this network across all of Pepco's technology investments, as it will support all applications if they share a common communications network.

5. Metering Issues

The metering of District of Columbia electricity customers is more difficult than suburban areas of Pepco's service area and as a result the installation of AMI for all District of Columbia customers may be more expensive and time consuming than Pepco's Maryland AMI installation. This is due to three factors: 1) the urban nature of the District, 2) security issues related to the nation's capital, and 3) the comparatively older age of many of the District's residences and commercial buildings. More than half of all District of Columbia electricity meters are located inside buildings rather than mounted on exterior walls, thereby creating meter installation scheduling difficulties. As a result of these indoor meters, Pepco maintains more than 42,000 keys to permit meter readers to access many indoor meters. Approximately 27,000 of the residential indoor meters are difficult to access due to difficulties coordinating entry with the residents. Many customers with inside meters have constructed walls or other obstructions around their meters, a portion of which will have to be removed to accommodate AMI related meter replacements. Additionally, the Company expects that the installation of new meters will require the change out of more than 15,000 meter sockets that are incompatible with the installation of new meters. Security issues related to Federal buildings and foreign embassies will further complicate the installation of AMI compatible meters. Meters located in larger buildings are frequently located several floors underground, complicating AMI meter communications.

6. AMI Benefits

Pepco has identified the following major benefits that could be derived from the universal deployment of an AMI System in the District of Columbia.

- Remote Meter Reading
  - Eliminates need for meter reader to read the meter: A permanent AMI communication network can exchange data with meters and virtually eliminate the need for any utility employee or utility contractor to access the meters on a monthly basis for meter reading. Customer benefits include increased customer security, minimized billing anomalies (misread, estimated read etc.), elimination of meter reading access issues, and the immediate availability of energy consumption data to permit rapid utility response to high bill inquiries. Together these customer benefits are expected to greatly enhance Pepco District of Columbia customer service and to increase Pepco customer service satisfaction.
  - Permits more frequent readings: An AMI system creates customer benefits by enabling meter reading on a daily basis, thereby collecting hourly electricity readings. This supports the provision of additional energy consumption data to customers to improve their ability to control energy costs. An AMI System's ability to collect interval data on a daily basis creates a valuable database. This rich database, in conjunction with an internet accessible energy services portal, enables customers to readily determine how and when they use energy and to develop strategies for lowering their bills.
  - Supports enhanced customer service capabilities: Resulting customer service improvements are expected to include customer selectable billing dates, improved utility response to high bill inquiries, the ability to readily obtain meter readings that coincide with customer requested move dates, and the rapid utility notification of customer outages.

- o Improves reading accuracy: An AMI system improves the accuracy of meter readings and, thereby, the calculation of all customer bills.

- o Discovers malfunctioning meters: An AMI system includes numerous processes to verify that the meter is recording properly. Each meter includes software designed to detect meter and communication malfunctions that can be directly reported to the utility.

- o Provides additional customer specific load research data: AMI systems are designed to support customer specific load research by compiling interval data for all customers. The data can be used by Pepco's distribution and transmission system planners to optimize the design of the electric system. Competitive electricity suppliers can use the data to refine their price offers to customers. Wholesale electricity suppliers participating in the SOS bid process can improve their price bids based on the data. Additionally, the interval data support the evaluation of the impact of both energy efficiency and demand response programs.

- Demand Response

  - o Integration of AMI System with demand response enabling technology: AMI systems can support the installation of demand response technology, such as remotely controllable programmable thermostats, to directly reduce customer electricity demand during periods of high electricity demand. In the future, other electricity end-uses may be installed that have the capability to automatically reduce electricity demand during periods of high electricity prices.

  - o Supports demand response through pricing options that more closely track wholesale electricity market supply conditions: Examples of effective voluntary rate options that directly reflect existing electricity market conditions include: hourly pricing, critical peak pricing, and critical peak load reduction rebates. These alternative rate mechanisms can be designed to reflect either day-ahead or real-time PJM Pepco Zonal Locational

Marginal Prices. Participants in these rate options can reduce their monthly electricity bills by reducing their electricity consumption during high priced periods and thereby place significant downward pressure on regional electricity energy and capacity prices – benefiting all Pepco District of Columbia customers.[21] These rate options combined with the availability of direct load control technology are a powerful tool for reducing the overall peak electricity demand in The District of Columbia, in a customer friendly manner.

- Enhances customer control over monthly bills through additional billing information regarding electricity consumption: As discussed above, AMI enables utilities to empower better customer control over energy costs in ways as simple as showing the customer on their monthly billing statements when they use energy.

- Distribution System Monitoring
  - Improving distribution system design, reliability and performance: Smart Grid concepts are now available that permit the utility to deploy an array of sensors and control devices supported by an AMI system to provide additional near real-time monitoring. Examples include transformer load management, feeder load analysis, recloser control, fault indicator monitoring, voltage and phase monitoring, and capacitor bank switch control.

- Distribution System Asset Management
  - Outage Reporting: Supports more rapid customer restoration time: An AMI system can detect outages without customer calls. This enables

[21] A study released on January 29, 2007 and commissioned by the Mid-Atlantic Distributed Resources Initiative ("MADRI") and the PJM Interconnection, LLC, found that electricity day ahead prices would be reduced by 5 to 8 percent or by $57 to $182 million assuming a 3 percent peak demand reduction in the Mid-Atlantic area. The estimated savings for the District of Columbia range from $1.6 to $5.3 million. These saving figures will be significantly greater if price impacts on the following PJM market components are included: real time energy market prices, capacity prices, and PJM ancillary market prices.

Pepco to respond to outages as quickly as possible and often before the customer even knows an outage has occurred. AMI systems are also capable of reporting momentary outages that could indicate a loose conductor coupling, loose neutral or other service issues including a rubbing tree branch.

- o Repair crews can be dispatched with improved accuracy: AMI data allows utilities to dispatch repair crews in a more efficient manner. The data permits the utility to acquire outage data within minutes of an event -- permitting Pepco to determine the type of repair likely to restore power most quickly to the greatest number of customers. Customer benefits from this include minimization of outage inconvenience, reduction in lost revenues, and minimization of lost product (restaurants, manufacturing etc).[22]

- Remote Service Disconnect

  - o Reduces utility service visits: AMI coupled with remote Service Connect and Disconnect ("SCD") enables the utility to remotely disconnect customers. This enables the utility to disconnect service for a departing customer and thereby lessening disagreements over departing/arriving customer energy use. Additionally the utility can turn on service for a new customer virtually in real time rather than the customer having to wait for a utility crew to perform the task. This increases customer satisfaction while reducing utility costs especially for locations with high levels of SCD activity. AMI enables a future vision of self service for many activities allowing customers greater flexibility and increased satisfaction.

    Similarly, AMI can reduce service calls and outages attributable to a customer based outage event such as a circuit breaker opening during a

[22] Pennsylvania Power and Light claims that its Hurricane Isabel efforts were substantially aided by its AMI system resulting in an estimated 10% reduction in restoration costs and a 6 hour improvement in system wide recovery.

storm. Most customers assume the problem is utility based and the normal process is for the utility to dispatch a field crew. Conceptually, an AMI system could be used by a customer service representative for a real time meter service audit to determine if power is being supplied and if the meter is operational and has not lost supply to a meter leg. In response to many of these events, Pepco can restore service in minutes without the need or expense of a field crew visit.

- Tamper Detection
  - Informs utility of possible meter tampering: AMI systems are designed to support revenue assurance and the minimization of meter tampering. This is accomplished with sensors that can detect some of the major methods of tampering to detect anomalous patterns of energy use that are otherwise difficult or expensive to detect. This helps to ensure that other customers are not unfairly burdened.
- Supports New Rate Options
  - Renewable Generators

    Pricing tariffs that reward renewable generators (or other distributed generation resources) for their production of electricity during periods of high energy prices will be supported. This is particularly valuable for resources such as photovoltaic systems, which supply energy during summer weekdays. Additionally, utility monitoring of the production of all distributed generators can be accomplished remotely to ensure the adequate supply of electricity and to provide the data necessary for these resources to participate in the regional Renewable Energy Credit ("REC") market.
  - Plug-In Vehicles

    Rate designs that support the expected surge in the use of plug-in vehicles through pricing that is substantially lower during nights and weekends can

be readily accommodated. These electricity rates will encourage greater numbers of customers to purchase these vehicles by helping to reduce their operating costs. All District of Columbia customers will benefit through reductions in vehicle air emissions – a major source of air pollution in the State. Simultaneously the District of Columbia's dependence on foreign sources of energy will be lessened.

- Time Differentiated Pricing Options

Electricity rate pricing options that include critical peak pricing and/or hourly prices related to day ahead or real time wholesale energy market prices can be offered by the utility and competitive suppliers. Customers electing these rates will have the opportunity to reduce their electricity bills by reducing their use of electricity during high priced hours. These rates will result in lowered demands for electricity during high priced periods, thereby lowering regional market electric energy and capacity prices for all District of Columbia consumers. These rates will encourage customer participation in demand response programs, including the Company's proposed smart thermostat program.

Potomac Electric Power Company
Attachment
Filed April 4, 2007

PEPCO'S BLUEPRINT FOR THE FUTURE PLAN

BLUEPRINT COST RECOVERY

III. PROPOSED COST RECOVERY

1. BSA Mechanism

In its filing in Case Number 9092, the Company has proposed a Bill Stabilization Adjustment ("BSA"), a billing adjustment to be applied on a quarterly basis for all customers. The Company's filing provides a detailed description of the BSA mechanism and the advantages it offers to both the customer and the Company, including allowing the Company to actively promote DSM related programs. This section contains a brief summary of the Company's filed BSA proposal.

The BSA is intended to stabilize revenue fluctuations resulting from unanticipated changes in electricity use, and ensures that the Company only recovers the Commission approved level of distribution costs. In essence, the BSA provides for decreases in delivery rates if actual revenues per customer are above the Commission approved level, and it provides for increases in delivery rates if actual revenues per customer are below the Commission approved level.

The BSA will promote demand side management measures. In this filing, the Company is proposing development of electric energy efficiency measures and demand response services for residential and small commercial customers, as part of an overall response to the recent increases in supply prices. Demand side management programs reduce sales and, consequently, revenues and fixed cost recovery decline. This creates a disincentive for the utility to consider demand side resources. The existing rate structure provides strong incentives for utilities to sell as much electricity as possible in order to maximize profit. The BSA removes the incentive for the Company to maximize its sales in order to benefit shareholders. Without the BSA, the Company's shareholders benefit with each additional kWh delivered. With the BSA, the link between increased sales and profits is broken. The Company's interest in helping its customers use energy wisely and efficiently is no longer at seeming odds with the interests of shareholders. By decoupling the Company's revenues from changes in the volume of electricity delivered to customers, the adoption of the BSA aligns the Company's interests with the interests of the customer. The adoption of the BSA mechanism is a critical component of the Company's overall proposal to institute conservation programs to help customers meet

the challenges of the current high costs of energy, without conflicting with the interests of shareholders.

It is important to keep in mind that the BSA would only be applicable to the distribution portion of the customer's bill; currently, the distribution portion accounts for only 17% of the average residential customer bill. The supply portion of the bill, which accounts for almost 75%, would not be subject to the BSA. This has several important ramifications. First, customers still have a strong incentive to use energy efficiently, based on the savings associated with the supply side of the bill. Second, by being applicable to only the distribution portion of the bill, the BSA should create minimal fluctuation in the total amount of a customer's bill.

2. DSM Funding Options

Two alternative methods exist to fund Pepco's DSM expenditures, other than smart thermostat related capital costs. The Commission could fund newly approved Pepco managed programs through the existing Reliable Energy Trust Fund ("RETF") electric distribution bill surcharge or through a newly established DSM surcharge. The Reliable Energy Trust Fund was established by the District of Columbia Council through the Retail Electric Competition and Consumer Protection Act of 1999 (the "Act"). The Act permits a RETF public benefits surcharge on electricity distribution bills that would not exceed $0.0008 per kWh during the first four years of its implementation and a surcharge that would not exceed $0.002 per kWh thereafter. The Act required that any collected RETF funds be used to support only low income programs, energy efficiency programs, and renewable energy programs. The Act authorized the Commission to determine the types of programs that would be funded through the RETF. (DC Code § 34-1514)

The Commission authorized an accelerated effective date of January 1, 2001 for the implementation of the RETF surcharge and approved a low income customer aggregation program, an expansion of the benefits available to participants of the Residential Aid Discount (RAD) Program, and a Low-Income Home and Apartment Weatherization Program. As a result of the merger of Pepco and Conectiv, the Company agreed to absorb the then existing RETF expense of $0.00021 per kWh beginning after

the closing of the merger through August 7, 2007, per the Unanimous Agreement of Stipulation and Full Settlement (Settlement Agreement) filed with the Commission on February 27, 2002. The Settlement Agreement was approved by the Commission on May 1, 2002 in Order No. 12395, Formal Case No. 1002. The Commission approved DDOE's implementation of $10.5 million of RETF funded "Year 2" programs through Order No. 13475, issued on March 7, 2005. On December 13, 2006 the Commission issued Order No. 14139 approving an increase in the existing RETF surcharge by $2.9 to $3.3 million to help offset an increase in generation related Residential Aid Discount rates effective February 8, 2007. Total annual RETF program funding is now approximately $13.6 million, of which $8.8 million relates to low income programs.

The current maximum RETF surcharge rate is $0.002 per kWh. If the RETF surcharge were set at this level, it would result in the collection of approximately $23.1 million annually.[23] If RETF funding for low income programs remains at $8.8 million, approximately $14.3 million would be available annually to support energy efficiency and renewables programs. If each of Pepco's proposed DSM and renewables related programs were funded through the RETF, excluding the capital costs related to the installation of smart thermostats, the Year 3 expenditures would equal approximately $10.3 million.

The advantage of funding Pepco's proposed DSM and renewables expenditures, other than smart thermostat related capital costs, through the RETF is that the surcharge mechanism already exists. The disadvantages of funding the new programs in this manner include the following. First, there is no provision under the RETF funding Act to differentiate the surcharge for different customer classes based upon program expenditures for a particular customer class. A flat RETF rate per kWh for all electric distribution customers is likely to be a concern for larger customers. Second, over time it is likely that RETF funded low income programs, energy efficiency programs, and renewable generation programs will be forced to compete for limited RETF funds. It is worth noting that at this time annual RETF program expenditures are funded through

[23] Estimated based upon Pepco's 2007 forecast District of Columbia distribution customer energy sales. Distribution energy sales to customers under the Residential Aid Discount ("RAD") are excluded by statute from paying the RETF surcharge.

matching annual RETF collections. In the future, RETF program expenditures could be allowed to exceed RETF collections during some years if provisions were made to permit recovery of expenditures and annual carrying costs equal to the Company's approved rate of return over time (not to exceed five years).

Alternatively, DC Code §34-1511 permits the Commission to establish a surcharge mechanism to recover Pepco's costs for "public purpose" programs established by law or by the Commission. Therefore, the Commission could establish a DSM electric distribution surcharge mechanism that would recover all DSM expenditures, other than smart thermostat related costs, over a five year period.[24] Program costs would be allocated to each rate class eligible to participate in each implemented program. This surcharge mechanism would be similar to the DSM surcharge mechanism that existed in the 1990s for Pepco in Maryland and the District of Columbia. Pepco's annual carrying cost of any unrecovered expenditures would equal the Company's approved rate of return.

The surcharge amount would be established by an annual Pepco DSM surcharge adjustment filing, subject to Commission approval, based upon the forecast level of expenditures for the next program year and any required "true-up" adjustments for over or under collections from the prior year. If Pepco's recommended DSM programs were implemented, the estimated maximum monthly surcharge for residential customers would be $0.001252 per kWh and $0.000500 per kWh for non-residential customers.

The advantages of funding Pepco's proposed programs through a new distribution surcharge mechanism include: 1) the ability to vary the surcharge amount by customer class, 2) avoiding RETF funding related constraints and the need to compete with low income programs, and 3) the ability to establish a five year recovery period for program costs to ensure that program costs more closely align with resulting customer benefits.

[24] The DSM cost recovery period in Maryland was established at five years and in the District of Columbia was established at ten years. Pepco believes the Maryland recovery period is more appropriate to avoid potentially stranded DSM utility investments.

3. AMI Adjustment Mechanism

The deployment of AMI technology will require the removal and disposition of existing meters that are not fully depreciated and may require replacement of, or significant modification to, existing meter reading, communications, and customer billing and information infrastructure. To encourage the implementation of this new technology, the Commission should adopt ratemaking policies that remove a utility's disincentive toward demand-side resources that reduce throughput. The Commission should also provide for timely cost recovery of prudently incurred AMI expenditures in order to provide cash flow to help finance new AMI deployment.[25]

Pepco requests that a base rate electric adjustment mechanism ("AMI Adjustment Mechanism") be adopted to recover the capital costs associated with the installation of smart thermostats and the AMI on a timely basis between base distribution rate cases. Specifically, the AMI Adjustment Mechanism would be set annually on the basis of total project expenditures during the previous 12 month period. Pepco proposes to net utility cost savings[26] resulting from AMI deployment from the cost recovery sought each year. Pepco requests that the cost of retiring all existing meters be recovered through the AMI Adjustment Mechanism over a three to five year period to recover stranded costs. Pepco's rate of return on any unamortized expenditures would equal the Company's approved rate of return. The amount of the AMI Adjustment Mechanism would vary by customer class, reflecting any AMI or smart thermostat cost differences. If the Commission approves the AMI Adjustment Mechanism, the monthly bill impact on customers after full AMI deployment is estimated to be no higher than $7.00 initially for each electric customer. These costs will be offset by energy cost reductions, utility cost reductions, and service quality improvements.

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[25] ERE-1 *Resolution to Remove Regulatory Barriers to the Broad Implementation of Advanced Metering Infrastructure,* Adopted by NARUC Board of Directors on February 21, 2007, NARUC Winter Meetings, Washington, DC.

[26] Expected utility cost savings include the elimination of meter readers and reductions in the number of Pepco customer service visits.

An alternative utility cost recovery approach could be obtained through electric base rate case filings; however, this mechanism has the significant disadvantage of delaying the timing of Pepco's cost recovery for a significant capital cost project and having a potentially adverse impact upon the Company's cost of capital.

Potomac Electric Power Company
Attachment
Filed April 4, 2007

PEPCO'S BLUEPRINT FOR THE FUTURE PLAN

APPENDIX A

DSM COST-EFFECTIVENESS

DSM Cost-Effectiveness Screening

During December 2006, PHI completed an extensive study of DSM options as part of a required Delaware specific integrated resource planning ("IRP") study. That study included an exhaustive cost-effectiveness screening of potential DSM measures followed by a least-cost modeling effort to select the least cost supply measures. Because of the high level of detail associated with that study and its geographic proximity to the Pepco service territory, it became the logical starting point for Pepco's recommended District of Columbia DSM screening work. Due to budgetary constraints and the significant limitations of an IRP in a competitive generation supply market, Pepco did not conduct the elaborate least-cost modeling work for its development of recommended DSM programs in the Pepco District of Columbia service territory.

In brief, the IRP study consisted of screening an extensive list of individual measures for cost-effectiveness, bundling passing measures into programs, estimating the rate at which these programs could be implemented in the marketplace, and calculating associated program costs and benefits. Therefore, to evaluate the applicability of this study to other PHI service areas, consideration was given to whether measures remain cost-effective and how variations in customer characteristics might affect potential program impacts. The method used to develop the recommended DSM programs is described below, including discussion of instances where the assumptions from the Delaware analysis were deemed valid and instances where revised assumptions specific to the Pepco District of Columbia service territory were used.

Measure Identification

The list of measures considered was focused on measures which are currently commercially available technologies and that provide some energy reduction benefits relative to a standard or baseline option. The list does not include emerging, fuel switching, or distributed generation technologies, but instead focuses on well-defined technological options suitable for inclusion in DSM programs.

To develop the list for the commercial and residential sectors, historical Pepco studies were reviewed and supplemented with ICF International's proprietary database of

energy efficiency technologies and other available public sources. The list of 28 residential measures considered is listed in Exhibit A-1. The list of 27 non-residential measures considered is provided in Exhibit A-2.

Exhibit A-1: Residential DSM Measures Considered

1.	Central AC Quality Installation	15.	ENERGY STAR Dishwasher
2.	Central AC Tune-Up	16.	ENERGY STAR Groundsource Heatpump
3.	Central Heatpump Quality Installation	17.	ENERGY STAR Home
4.	Central Heatpump Tune-Up	18.	ENERGY STAR Refrigerator
5.	Duct Sealing	19.	ENERGY STAR Window AC
6.	Efficient Basement Insulation	20.	High-Efficiency Pool Pump and Timer
7.	Efficient Ceiling Insulation	21.	High-Efficiency Portable Electric Spas
8.	Efficient Domestic Hot Water Heater	22.	Home Performance with ENERGY STAR
9.	Efficient Wall Insulation	23.	Programmable Thermostat
10.	Efficient Windows	24.	SmartStats
11.	ENERGY STAR Central AC	25.	Updated Energy Code
12.	ENERGY STAR Central Heatpump	26.	Water Heater Load Control
13.	ENERGY STAR CFL	27.	Weatherization Assistance
14.	ENERGY STAR Clothes washer	28.	ENERGY STAR Dishwasher

Exhibit A-2: Non-Residential DSM Measures Considered

1.	Building Commissioning	15.	LED Exit Sign (4 W)
2.	Central Chiller Quality Installation	16.	Linear Fluorescent (2L4' F28T8/SS) Lighting
3.	Copier Power Management Enabling	17.	Network PC Monitor Power Management Enabling
4.	Efficient Windows	18.	Occupancy Sensors (Lighting)
5.	Energy Management System	19.	Operator Training and Maintenance Program
6.	Heatpump Quality Installation	20.	Package AC Quality Installation
7.	High Bay T5 (4L4' F28T5/HO) Lighting	21.	PC Power Management Enabling
8.	High-Efficiency Central Chiller	22.	Perimeter Daylighting Controls
9.	High-Efficiency Heatpump	23.	Printer Power Management Enabling
10.	High-Efficiency Motor	24.	Screw-In Compact Fluorescent Lighting
11.	High-Efficiency Package AC	25.	SmartStats
12.	High-Efficiency Packaged Terminal AC	26.	Split AC Quality Installation
13.	High-Efficiency Split AC	27.	Updated Energy Code
14.	High-Efficiency Vending		

Measure Impact Estimation

For each of the measures identified above, energy and demand savings were estimated by applying them to all applicable sectors of the Pepco service territory in the District of Columbia. For example, energy and demand savings were estimated for a high-efficiency central air conditioner installed in existing and new residential construction, with a variety of HVAC systems (e.g., central air conditioner with gas

furnace, central air conditioner with electric resistance heating). The method used to evaluate technologies was selected based upon whether the technology was weather-sensitive or non weather-sensitive.

The demand and energy impacts of each weather-sensitive technology were estimated by first defining a baseline from which savings were measured. Energy and demand impacts are influenced by the characteristics of the building to which they are applied. For example, changes in architectural characteristics (e.g., size, window area), energy efficiency features (e.g., insulation levels, equipment efficiencies), and operating characteristics (e.g., hours of operation, occupancy levels) will impact demand and energy savings associated with that measure. Baseline building characteristics were established for both the residential and commercial building sector and for both new and existing construction.

A review of available Pepco data and external data was conducted to assess differences in residential buildings between Delmarva Delaware and Pepco District of Columbia service territories. Recent data from the U.S. Census Bureau were determined to be best for this purpose. The key characteristics for each area's residential buildings are displayed below. Data were obtained for all counties within the Delmarva Delaware service territory and a weighted average was calculated using the total buildings within each county.

Exhibit A-3: Key Characteristics of Residential Sector

	Delmarva DE[27]	Pepco DC
UNITS IN STRUCTURE		
1-unit, detached	56%	14%
1-unit, attached	14%	27%
2 units	2%	3%
3 or 4 units	3%	7%
5 to 9 units	4%	7%
10 to 19 units	5%	10%
20 or more units	5%	32%
Mobile home	11%	0%
Boat, RV, van, etc.	0%	0%
YEAR STRUCTURE BUILT		
1999 to March 2000	3%	1%
1995 to 1998	8%	1%
1990 to 1994	10%	1%
1980 to 1989	18%	5%
1970 to 1979	16%	9%
1960 to 1969	14%	15%
1940 to 1959	20%	33%
1939 or earlier	11%	35%

As can be seen from Exhibit A-3, the structure types within the residential sector are similar. Most notably, the District of Columbia has fewer mobile homes and more large multi-family units than Delmarva. This difference is addressed at the program design level, for which a higher percentage of room air conditioners are accounted for. With regards to the age of the structures, the District of Columbia structures are of an older vintage than Delaware. Because more than 90% of the structures were constructed more than 25 years ago, it is reasonable to assume that many of the energy efficiency features of these homes (e.g., HVAC systems, water heating systems, attic insulation, and lighting) have been updated to more recent efficiency levels, making them comparable with the features of the homes analyzed in the Delmarva Delaware territory. Other features less likely to be updated (e.g., wall insulation, foundation insulation) would have a marginal impact on energy consumption in the District of Columbia region due to the prevalence of multi-family buildings. This is due to the decreased percentage of exterior wall area in this housing type, relative to single-family detached homes. Therefore, the

[27] Delmarva Delaware service territory includes all counties within Delaware - Kent, New Castle, and Sussex.

characteristics of the Delmarva Delaware residential buildings are expected to be similar to those in the District of Columbia.

Less data about building characteristics were available for the commercial sector. However, it could not be assumed that the building sectors were identical. Data from the Commercial Buildings Energy Consumption Survey (CBECS) were used to represent the types of commercial buildings in the District of Columbia. Because CBECS only contains data defined at the census region level, as opposed to state or county level, the data for the relevant census region were compared to local survey data that were available in the Delmarva territory. Exhibit A-4 lists the types of commercial buildings in the Pepco territory, as represented by CBECS, and the Delmarva territory, as represented by local survey data.

Exhibit A-4: Distribution of Commercial Building Sub-Sectors

	Delmarva DE	Pepco DC
Office	3%	14%
Restaurant/Bar	19%	7%
Grocery	8%	6%
Retail (Non-food) & Service	45%	29%
Wholesale/ Warehouse	0%	14%
Hotel/Motel	1%	3%
Recreation	3%	5%
Health/Medical	3%	3%
School/Education	1%	10%
Church/Religious	13%	9%
Public Order & Safety / Social Service	1%	0%
Other	3%	0%
	100%	**100%**

The data from CBECS indicate that the District of Columbia contains a higher percentage of small and large office building than those found in the Delmarva service territory. Therefore, additional energy simulations were conducted to account for this variance, while the analysis completed for Delmarva was considered representative of the small office building and other sectors. The same measures analyzed for the small office sector (e.g., energy management systems, building commissioning) were applied to the supplemental large office analysis, with the exception of the high-efficiency

HVAC measure. Because large offices often employ chiller-based HVAC systems, the large office analysis used this equipment type and the savings potential of a high-efficiency chiller system was added.

Aside from the differences noted above, the cost-effectiveness of individual measures on a per building basis will not be significantly impacted. Commercial measures considered were largely focused on improvements to lighting and cooling system efficiencies. These types of measures should be equally applicable to the sub-sectors with greater prevalence in the Pepco District of Columbia territory, meaning that incremental costs and savings are expected to be consistent on a per building basis, along with overall cost-effectiveness.

As a final assessment of the applicability of the baseline buildings used in the Delmarva Delaware study, average electrical consumption per customer was compared between service territories. Exhibit A-5 contains average annual 2006 customer usage.

Exhibit A-5: Average Electrical Consumption per Customer

Customer Class	Delmarva DE	Pepco DC
Residential	11,033	8,788
Small Commercial (<100 kW)	8,894	46,169

This exhibit shows that the average annual electric consumption of Pepco residential customers is somewhat less than that of Delmarva customers. This is consistent with the greater prevalence of multi-unit and attached housing indicated in Exhibit A-3 3 and is accounted in program planning by increasing the percentage of room air conditioners in the Pepco DC service territory. The large increase in average consumption for small commercial customers is attributable to the significantly higher percentage of office buildings in the DC Pepco service territory. This is accounted for by adjusting the quantity of each measure that can be implemented in the service territory to match the prevalence of each commercial sub-sector. For example, the quantity of building commissioning measures and the associated benefits for a commercial office building are greatly increased.

The baseline building definitions and each individual DSM measure were then entered into the DOE2.1E energy simulation modeling program. DOE2.1E is a

nationally-recognized standard computer program for performing energy analysis on buildings, and has been widely used by industry for almost 20 years. DOE2.1E is accepted for determining energy efficiency by the American Society of Heating, Refrigerating, and Air-conditioning Engineers (ASHRAE) and has been validated for accuracy both in controlled laboratory studies and in comparison with actual detailed building metered energy use. The DOE2.1E program and this approach have been used by numerous utilities (including Pepco), Federal, and state agencies (including EPA's ENERGY STAR Program) for analysis of the impacts of energy-efficient technologies.

To simulate the performance of buildings, DOE2.1E requires hourly weather data. Building simulations commonly employ Typical Meteorological Year (TMY) weather data, which is a subset of collected weather data selected to represent the range of weather conditions the location is likely to experience over many years. The best readily available TMY weather data in the proper format for Pepco's District of Columbia service territory is Sterling, VA. Therefore, each of the measures was modeled using this location in DOE2.1E to determine its energy and demand impact. These models and simulations represent approximately 85% of the residential buildings and 75% of the commercial buildings within the service territory, with the remaining comprised of unclassified buildings (e.g., denoted by the "other" building type in the Delmarva Power baseline studies), building types with very little representation, or buildings with few applicable DSM measures.

For the non weather-sensitive measures, the savings were estimated (primarily using ICF engineering calculations or the experience of other utilities) by comparing the energy-efficient technology to a standard efficiency baseline technology. In certain cases, the 2005 Database for Energy Efficiency Resources (DEER) was used, which is widely regarded as the most extensive database of energy efficiency technologies available. For each technology, available data were gathered or ICF assumptions used to estimate annual electricity consumption and peak demand savings relative to a standard baseline technology. In addition, the percentage of peak demand savings coincident with system peak was estimated.

Measure Cost Estimation

The cost of each measure relative to baseline practices was developed next. To establish measure costs at this initial stage of estimating the potential for energy efficiency programs, the industry standard practice of using high quality estimates from other studies was followed, validated and adjusted where possible to reflect Pepco-specific factors. Existing Pepco filings, research, and additional sources, primarily the DEER database, were reviewed. If these preferred sources of measure costs were not available for particular technologies, other DSM program filings, vendor quotes, monitoring and evaluation reports, or professional judgment as necessary were used. Note that ICF recommends that measure costs be validated as a component of detailed program design, and monitored on an ongoing basis as a part of program implementation.

Cost-Effectiveness Screening

After each technology is characterized by energy savings, demand savings, and incremental cost, the individual technologies could then be evaluated using a simple screening test. The purpose of conducting this test was to exclude measures that were not cost effective under a favorable set of economic assumptions from further consideration. Cost-effectiveness of each measure was evaluated using the All Ratepayers Test (ART) metric, which is defined as follows:

$$Benefits_{ART} = \sum_{t=1}^{Life} \frac{S_{Electricity} \cdot EAC_t + S_{Peak} \cdot PAC_t + S_{Gas} \cdot GAC_t}{(1+d)^t}$$

$$Costs_{ART} = \sum_{t=1}^{Life} \frac{IC_t}{(1+d)^t}$$

Where:

- Life is the life of the measure in years
- $S_{Electricity}$ is the annual kWh of electricity savings for the measure
- EAC_t is the electricity avoided cost per kWh in year t
- S_{peak} is the coincident peak savings of the measure
- PAC_t is the peak avoided costs per coincident kW in year t
- S_{Gas} is the annual therms of gas savings for the measure
- GAC_t is the gas avoided cost per therm in year t
- IC is the measure's incremental cost
- d is the discount rate

This test was used for screening to be consistent with past evaluations completed by Pepco in District of Columbia. ART values were calculated for individual measures using the revised energy and demand impact estimates, regionally specific avoided energy, capacity, and T&D costs and discount rates. These key economic parameters are listed in Exhibit A-6.

Exhibit A-6: Key Economic Parameters Used in Calculating ART Values

Key Economic Parameters	Pepco DC
Discount Rate	9.09%
Avoided Capacity Cost ($/kW)	92
Avoided Energy Cost ($/kWh)	0.060
Avoided Energy Cost ($/therm)	1.07

The electric avoided energy cost assumption listed above was developed by discounting the $0.08556 per kWh Standard Offer Service rate by a typical retail supplier margin. For avoided capacity costs, the assumption is based on analysis of preliminary results from near-term PJM capacity market auctions. These results suggest that capacity prices over the coming years are likely to be in excess of $100/kW in the District of Columbia PJM region due to generation unit location and limited availability of transmission import capability. Notably virtually all of the screened measures also

passed the cost-effectiveness screening test at an avoided capacity cost of $78/kW -- an avoided capacity cost level not fully reflecting the transmission congestion in the region.

Market Potential Estimation

Market potential estimates, sometimes called achievable potential, were developed to assess the maximum potential adoption rate of each measure and the rate at which such measures might be adopted by the marketplace through the implementation of DSM programs. Market potential thus depends not only on the technical characteristics of the individual measures, but also on the response of Pepco customers to program interventions. We estimated the total energy savings due to hypothetical programs from installation of the DSM measures. While this analysis was completed over a 25 year planning horizon, results are only presented for the initial three year implementation period.

To estimate the market potential for each measure, the maximum annual installations that would be achievable was first derived. A technology adoption rate was used to estimate how quickly the market would reach this maximum annual installation rate. The maximum annual installations were estimated for each measure by assigning values to the following factors and then calculating the product of all factors:

1. Total Sector Units – The total number of applicable buildings or homes. The value assigned was dependent upon whether the measure was to be applied to the existing or new sector. For measures applied to the existing sector, the value was the number of existing buildings or homes within Pepco's District of Columbia service territory. For measures applied to the new construction sector, the value was the annual quantity of new buildings or homes constructed within Pepco's District of Columbia service territory. Exhibit A-7 contains the 2006 residential and small commercial customer counts for the Pepco District of Columbia service territory. The Pepco District of Columbia values represent the total sector units used in this study.

Exhibit A-7: Customer Counts by Sector and Service Territory

Customer Class	Delmarva DE	Pepco DC
Residential	262,684	209,315
Small Commercial (<100 kW)	24,807	22,820

2. Relevance - The percentage of those buildings that include the baseline technology. For example, when considering a measure related to central air conditioning systems, the percentage of total homes with central air conditioning systems was assigned.
3. Technology Units Per Sector Unit - The number of technology units each building would contain. For example, one central air conditioning system per home was assigned.
4. Technical Applicability Rate - The percentage of those units for which it would be technically feasible to upgrade the baseline technology. For many measures, the applicability would be 100%. However, for certain measures, such as the addition of wall insulation to existing homes, variations in wall construction and accessibility would reduce the applicability below 100%.
5. Not Yet Adopted Rate - The percentage of units that have not already been upgraded to the efficient technology. Because each of the measures considered is commercially available, it is reasonable to expect that some percentage of the market has already adopted the measure and would not be affected by a DSM program.
6. Stock Turnover Rate – The annual percentage of units that would be eligible for replacement with the efficient measure. It was primarily assumed that existing units would be eligible for replacement at the end of their useful life and that existing units would reach end of life at an even rate that was inversely proportional to their lifetime. For example, units with an 18 year life would fail at a rate of 1/18, or 6% per year.
7. Payback Acceptance Rate – The maximum percentage of the marketplace that would be willing to adopt the technology, based solely upon the payback period.

This methodology estimates payback acceptance rates based on consumers' stated willingness to pay for energy efficiency projects with different paybacks. The acceptance rate for a technology is calculated given the fraction of consumers that would accept that technology's calculated payback period. The benefit of this approach is its simplicity, transparency, and grounding in actual consumer statements. However, it is important to note that consumers' hypothetical self-reported payback threshold generally differs considerably from their actual behavior.

The payback period (PB) for a technology is the number of years it takes to pay back the initial investment costs in energy savings. It is derived as follows:

$$PB_i = \frac{IC_i}{AS_i}$$

Where IC is the incremental cost and AS is the annual dollar savings from reduced energy use. In this case, the incremental cost represents the cost to the end-user for each measure, inclusive of incentives. Incentives were developed individually for each measure and designed to reduce the end-user's payback to two years, but were bounded at a minimum of 25 percent and a maximum of 75 percent of the total incremental cost for the measure. Separate payback acceptance curves were used for the residential and non-residential sectors. Exhibit A-8 shows these payback acceptance curves and the data points used to derive them. The curve shows the percentage of consumers willing to pursue an energy-saving project at a given payback period. The complete curves were developed through regression modeling of collected data points. The residential curve follows the function:

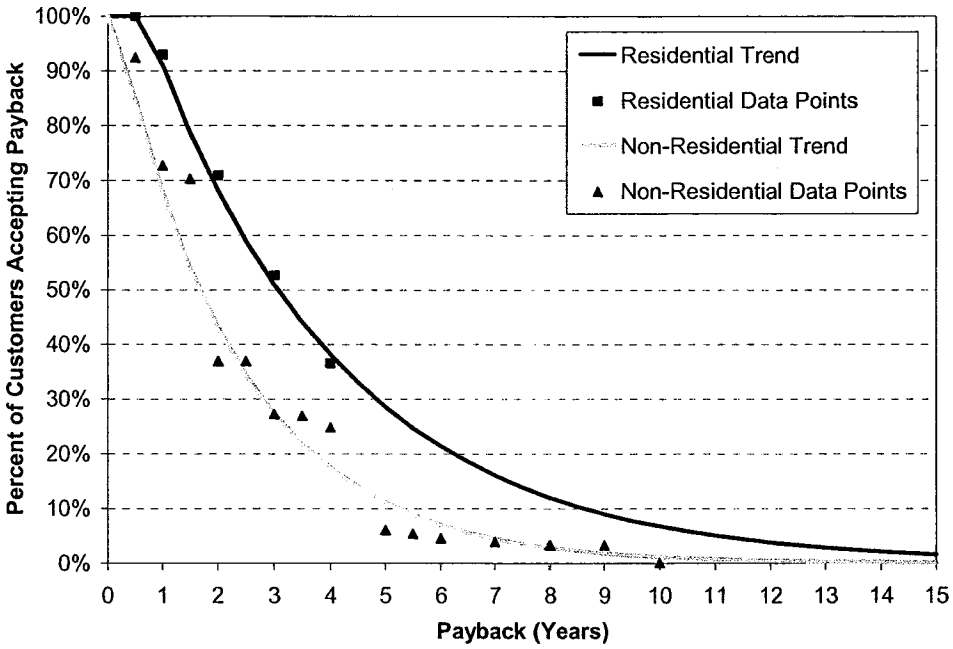
$$MS_i = 1.2154e^{-0.2895 PB_i}$$

The non-residential curve is defined by:

$$MS_i = 1.0658e^{-0.4524 PB_i}$$

At very low payback period levels, any derived market share greater than 100% is assumed to equal 100%. The implication of the curve is that willingness to pursue a project drops off very quickly as the payback period rises. Though the vast majority of consumers would be willing to pursue a project with a payback of 1 year, only half are willing to accept a project with a 3-year payback.

Exhibit A-8: Acceptance Payback Curves



Note that a generalized payback acceptance curve applied to a variety of technology types does not address some of the non-economic factors inherent in any purchasing decision. A model based on payback acceptance considers only the economic characteristics of energy efficiency technologies expressed as the simple payback. In addition, consumers' reported payback acceptance can differ considerably from their actual purchasing behavior. Indeed, if it were actually the case that 50 percent of all consumers readily accepted projects with 3-year paybacks, DSM programs would find it quite easy to meet their participation

targets. However, real program experience shows that consumer acceptance is often more difficult to achieve.

8. Market Applicability Rate – To address the particular concern that consumer acceptance does not derive from economic measures alone; the market applicability rate was estimated. This rate is intended to represent the maximum percentage of the marketplace that would be willing to adopt the technology, regardless of payback period. For example, a minority of consumers have adopted CFL's despite their economic advantages. Other aspects of the technology, such as reduced color rendering and increased warm-up time are likely reasons for reduced adoption.

As an example of how these factors were assigned and applied, consider an air conditioner upgrade for the existing residential market with a gas furnace and central air conditioner. It was estimated that Pepco's District of Columbia service territory encompasses 209,315 residential dwelling units (i.e., Total Sector Units). Of these, approximately 41 percent or 84,982 homes use a gas furnace with a central air conditioner, which could be upgraded to a higher efficiency air conditioner (i.e., Relevance is 41 percent). It was then assumed that, on average, each of these homes contains a single central air conditioning system (i.e., one Technology Unit per Sector Unit) and that it would be technically feasible to upgrade all units (i.e., 100 percent Technical Applicability). Of these 84,982 systems, it was then assumed that 73 percent, or 62,449 systems, had not already been upgraded to a high-efficiency air conditioner (i.e., 73 percent Not Yet Adopted). Assuming an average lifetime of 18 years and an even distribution of equipment age, it was assumed that a maximum of 1/18 of the units could be upgraded each year (i.e., 6 percent Stock Turnover Rate). With a post-incentive payback period of 10.4 years, the Payback Acceptance Rate was estimated to be 6% and that 75 percent of the market would be receptive to the installation of a high-efficiency air conditioner (i.e., 75 percent Market Applicability). The product of all factors results in a maximum annual installation rate of 156 units. An identical process was used to estimate the maximum number of annual units that could upgraded for each technology.

For this study, the values for relevance, technology units per sector unit, technical applicability rate, and not yet adopted rate were the same as those used for the Delmarva Delaware study. This approach is consistent with the assumption that the building characteristics in the two territories are similar.

For the majority of residential DSM measures, it was assumed that a single technology unit would be present per home (e.g., one central air-conditioner per home) and the savings and incremental costs were calculated using this basis. For some residential measures, such as lighting, and for the non-residential DSM measures, however, there were often multiple technology units per building, for which it was more appropriate to normalize the savings and costs. For example, for operator training and maintenance it was reasonable to estimate that savings and costs would be dependent on the tons of cooling present in a building. The three characteristics used most often to normalize the non-residential technologies included tons of cooling, square feet of conditioned floor area, and square feet of window area. The resulting number of technology units per building was then adjusted according to this metric.

Technology Adoption Rates

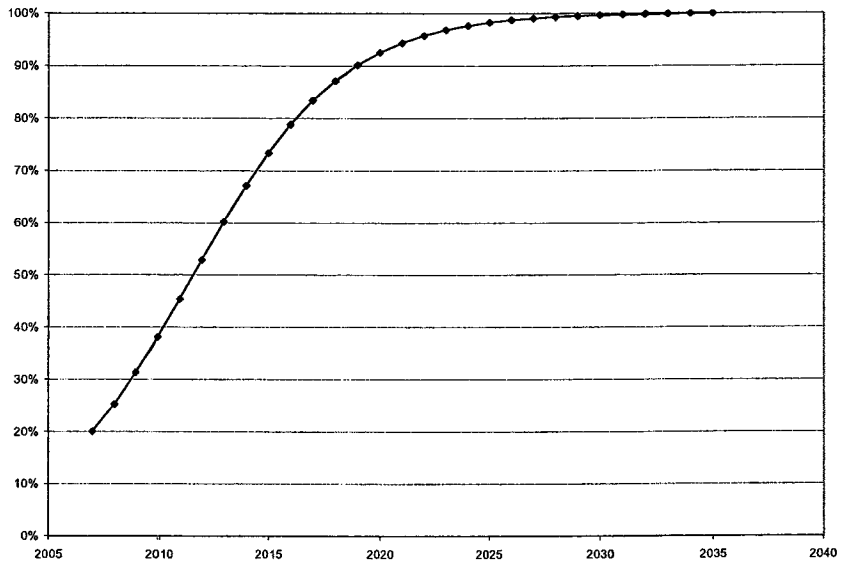
After maximum annual installations were established, the rate of adoption for each technology over a 25 year planning horizon was estimated using a logistic function. A logistic function or logistic curve models the S-curve of growth of some set P. The initial stage of growth is approximately exponential; then, as competition arises, the growth slows, and at maturity, growth stops. The function used was:

$$MS_i = (MS_0 - MS_m)/(MS_0 + (MS_m - MS_0))e^{-0.30t_i}$$

Where MS_m represents 100% of the maximum annual installations; MS_0 represents initial rate of installations, assumed to be one-fifth of MS_m; 0.30 represents a growth rate; and t represents time in years since the inception of the program. A generic logistic function is illustrated in Exhibit A-9. The only measures not using a logistic function to predict market penetration are the commercial and residential smart stats. In this case, Pepco was able to make specific projections about the rate at which this

technology can be deployed based upon its historic experience with the Kilowatchers Program and residential market penetration of residential central air conditioners.

Exhibit A-9: Generic Logistic Function Illustrated



Market Potential Results

Having determined DSM measures that meet the cost-effectiveness test, their market applicability, and the rate of their adoption, these individual measures were next bundled into measure groupings. Recall that individual technologies were applied to sub-sectors of the market. For example, the savings and costs of high efficiency air conditioners were evaluated separately for new and existing homes with a gas furnace and central air conditioner and then again for new and existing homes with electric resistance heating and a central air conditioner. Therefore, to create measure groupings, all related technologies that passed the screening test for their sub-sector were combined, resulting in a single line item for that technology. Potential savings among all individual technologies were summed, while the lifetime of the measure grouping was taken as an average of the lifetimes for the individual technologies.

Exhibit A-10 summarizes key economic measures and savings potential for all measure groupings. Over 367 DSM measures were screened, of which 65% percent were projected to have a favorable cost-effectiveness ratio of 1.0 or more.

Exhibit A-10

Key Economic Measures and Savings Potential of Measure Groupings

Measure Groupings	Sector	TRC	Levelized Cost per kWh	Levelized Cost per kW	Cumulative - Expirations (MW) Year 1	Year 2	Year 3
High Efficiency Room AC Rebate	Residential	7.1	$0.01	$6	1	3	4
Programmable Thermostat	Residential	5.9	$0.01	$237	0	0	0
Residential Efficient Windows	Residential	5.5	$0.03	$38	0	0	0
Hot Water Efficiency	Residential	3.1	$0.05	$132	0	0	0
Residential SmartStat	Residential	2.8	$0.17	$62	0	1	7
Weatherization	Residential	2.8	$0.02	$115	0	1	1
Residential CFLs	Residential	2.5	$0.01	$80	0	1	1
Home Insulation	Residential	1.8	$0.04	$518	0	0	0
High Efficiency Heatpump Rebate	Residential	1.7	$0.04	$83	0	0	0
Home Performance with ENERGY STAR	Residential	1.6	$0.08	$162	1	3	4
Duct Improvement Program	Residential	1.3	$0.17	$205	0	1	1
ENERGY STAR Homes	Residential	1.2	$0.18	$342	0	0	0
Heatpump Quality Install	Residential	1.2	$0.05	$138	0	0	0
Groundsource Heatpumps	Residential	1.1	$0.07	$178	0	0	1
Central AC Quality Install	Residential	1.0	$0.13	$99	0	0	0
Residential Pools and Spas	Residential	1.0	$0.06	$214	0	0	0
High Efficiency AC Rebate	Residential	1.0	$0.15	$85	0	0	0
Central AC Tune-Up	Residential	n/a	n/a	n/a	0	0	0
Heatpump Tune-Up	Residential	n/a	n/a	n/a	0	0	0
Residential Codes & Standards	Residential	n/a	n/a	n/a	0	0	0
ENERGY STAR Dishwashers	Residential	n/a	n/a	n/a	0	0	0
ENERGY STAR Cloteswashers	Residential	n/a	n/a	n/a	0	0	0
ENERGY STAR Refrigerators	Residential	n/a	n/a	n/a	0	0	0
Residential PV	Residential	n/a	n/a	n/a	0	0	0
Water Heater Load Control	Residential	n/a	n/a	n/a	0	0	0
Commercial SmartStat	Non-Residential	6.8	$0.56	$15	0	4	20
Non-Residential Motors	Non-Residential	5.6	$0.00	$16	0	0	0
Non-Residential Lighting	Non-Residential	3.6	$0.01	$34	1	2	3
Vending Machines	Non-Residential	3.4	$0.01	$72	0	0	0
Non-Residential Windows	Non-Residential	2.6	$0.01	$60	2	4	7
Non-Residential Office Equipment	Non-Residential	2.4	$0.01	n/a	0	0	0
Non-Residential High-Efficiency HP & AC	Non-Residential	2.3	$0.03	$26	8	19	33
Energy Management Systems	Non-Residential	2.2	$0.01	$73	1	2	4
Building Commissioning	Non-Residential	2.2	$0.01	$68	3	7	13
Operator Training and Maintenance	Non-Residential	1.4	$0.02	$257	0	0	0
Non-Residential HP & AC Quality Install	Non-Residential	n/a	n/a	n/a	0	0	0
Non-Residential Codes & Standards	Non-Residential	n/a	n/a	n/a	0	0	0
Total					19	48	101

Note: "n/a" values represent programs that had a TRC value below 1.0. Because these programs did not pass the screening test, the other metrics listed in the chart were not calculated. Non-residential HP & AC Quality Install was included as an appropriate measure because it supports the installation of efficiency equipment.

The levelized costs presented in this exhibit were calculated as follows:

$$LC = \frac{D}{(1-(1+D)^{-LF})} * \frac{(IC+AC)}{ES}$$

Where the levelized cost (LC) is calculated using a Company discount rate (D) of 9.09%, the weighted lifetime of the program (LF), the incentive costs (IC) and administrative costs (AC) of the program, and the energy savings (ES) of program.

The economic measures in the above exhibit are inclusive of both incentive costs and administrative costs. The derivation of incentive costs was discussed previously in relation to payback acceptance rates. Overall administrative costs were estimated to be 25% of incentive costs for all programs. Such program costs would include marketing, monitoring and evaluation, training, implementation, administration, and all other costs other than direct customer incentives associated with the programs.

The demand savings potential presented for each measure grouping was calculated for cumulative installations minus expirations in years one through three to gauge total potential of all programs over the initial implementation period and the relative contribution of each program to the total. When calculating impacts over the planning horizon, it was assumed that any unit installed as part of a measure would contribute savings until it reached its estimated measure life. At that time, the unit would expire and no longer contribute savings. However, it was also assumed that at the time of expiration that unit would be eligible for replacement at the full incremental cost and would save the same amount as the original unit.

To complete the analysis, measure groupings were combined into programs. The results of this final step are summarized in the main body of the filing. Programs were created by combining cost effective measure groupings similar in nature. For example, all residential HVAC high-efficiency, quality installation, and tune-up groupings were combined into the Residential HVAC program. Certain measure groupings that offered low absolute savings potential, that were encompassed by other measure groupings, or that would not easily integrate into the logistics of implementing the other programs were excluded during this initial three-year implementation period.