



A PHI Company

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Deborah M. Royster
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June 15, 2011

Mr. Jesse P. Clay, Jr.
Acting Commission Secretary
Public Service Commission
of the District of Columbia
1333 H Street, N.W.
2nd Floor, West Tower
Washington, DC 20005

Re: Formal Case No. 1070

Dear Mr. Clay:

Enclosed please find an original and fifteen (15) copies of Potomac Electric Power Company's ("Pepco") response to Order No. 16109 in Formal Case No. 1070, issued on December 20, 2010, wherein the Commission invited Pepco to file a request to establish a regulatory asset to recover costs for its proposed Demand Response program. Included is a redlined copy of the Residential Direct Load Control rate schedule for your convenience.

Please feel free to contact me if you have any questions regarding this matter

Sincerely,

A handwritten signature in black ink that reads "Deborah M. Royster /pm".

Deborah M. Royster

DMR/mda

Enclosure

cc: All Parties of Record

**BEFORE THE
PUBLIC SERVICE COMMISSION
OF THE DISTRICT OF COLUMBIA**

IN THE MATTER OF)
)
The Investigation into the Potomac) **Formal Case No. 1070**
Electric Power Company's Non-AMI)
Demand Response Program Plan)

**RESPONSE OF THE
POTOMAC ELECTRIC POWER COMPANY TO ORDER NO. 16109, ISSUED
ON DECEMBER 20, 2010 IN FORMAL CASE NO. 1070**

The Potomac Electric Power Company (“Pepco” or the “Company”) hereby submits its revised proposed residential air conditioner direct load control (“DLC”) program in response to Commission Order No. 16109, issued on December 20, 2010. The Commission Order denied Pepco’s January 20, 2010 request to establish a surcharge to recover the costs of its proposed residential DLC program, but invited the Company to file an updated request to establish a regulatory asset to recover costs for the proposed program.

This revised proposal updates the Company’s January 20, 2010 program proposal in the following ways: 1) it proposes cost recovery through the establishment of a regulatory asset rather than a distribution bill surcharge; 2) it updates the proposed timeline for the recruitment of participants and the deployment of equipment; 3) it updates the forecast cost for the program; 4) it updates the manner that participants will be compensated;¹ 5) it updates the forecast demand reductions; and 6) it updates the cost-effectiveness calculations based upon the revised costs and updated capacity market values. Pepco was awarded \$3.55 million of American Recovery and

¹ The Company had previously proposed that compensation for Direct Load Control participation be provided through AMI-enabled dynamic pricing. However, on May 26, 2011, the Commission issued Order No. 16377 in Formal Case No. 1056 denying the Company’s April 1, 2010 AMI-enabled dynamic pricing proposal. The Commission determined that AMI-enabled dynamic pricing should be now considered in FC Nos. 1083 and/or 1017.

Reinvestment Act (“ARRA;” “stimulus”) to support the deployment of residential DLC equipment in the District of Columbia. Commission approval of this program is required in the near-term to secure the awarded ARRA funds for a residential DLC program in the District of Columbia.

Background

On March 3, 2009, in Order No. 15205, the Commission directed Pepco to file a Non-Advanced Metering Infrastructure (“AMI”) Demand Response Program Plan. On April 2, 2009, Pepco filed its proposed non-AMI residential DLC program. Subsequently Pepco applied for and was awarded an ARRA grant \$44.6 million to support the deployment of smart grid equipment in the District of Columbia, including the deployment of an advanced metering infrastructure in the city. On December 17, 2009, the Commission issued Order No. 15629 in Formal Case Nos. 1056 and 1070 determining that sufficient ARRA funds had been awarded to permit Pepco to establish a regulatory asset to support the deployment of AMI in the District of Columbia.² Order No. 15629 also directed Pepco to submit a revised demand response program plan. Pursuant to the Commission Order, on January 19, 2010, Pepco submitted its revised demand response program plan to incorporate the deployment of AMI in the District of Columbia. On December 20, 2010, the Commission issued Order No. 16109 in Formal Case No. 1070, denying Pepco’s January 19, 2010, request to establish a surcharge to recover the costs of its proposed demand response program. The Commission has not ruled on the merits of the Company’s program proposal as of this date.

² Commission Order No. 15629 was issued in response to the City Council’s Fiscal Year 2010 Budget Support Second Emergency Act of 2009 (“the Act”). The Act effectively approved the implementation of AMI in the District of Columbia if the Commission determined that Pepco had received sufficient ARRA funds to make the deployment of AMI cost-effective. (D.C. Act 18-207, October 15, 2009).

Demand Response Program Proposal Specifics

Pepco previously revised the design of its previously proposed non-AMI demand response programs to take advantage of the capabilities of the Company's planned, and Commission approved deployment of an advanced metering system in the District of Columbia. At this time, the Company anticipates that its AMI meter deployment will be substantially completed by year-end 2011. The Company expects to be able to integrate the operation of its planned demand response programs into the available PJM markets beginning in 2012 to maximize the benefits of the programs for District of Columbia consumers. Pepco's proposed residential DLC program will enable participating residential customers to automatically achieve load reductions during high priced periods if the Commission permits the future introduction of dynamic pricing. The Company expects that some form of AMI-enabled dynamic pricing will become available to residential and non-residential District of Columbia customers in the future.

Residential DLC Program Plan

Pepco proposes to establish a new voluntary residential air conditioner DLC. The Company's proposed program is similar to Pepco's existing residential DLC program in Maryland (Pepco's Maryland Energy Wise Rewards Program).³ Unlike Pepco's current program in Maryland, Pepco's new residential DLC program has been designed to be deployed in an environment where AMI meters are in place for all distribution customers. Therefore, the timing of recommended residential DLC program implementation now reflects the Company's planned deployment schedule of the AMI System in the District of Columbia.

Pepco anticipates that the deployed AMI System will provide the communications link to the deployed DLC equipment by using the communication capabilities of the new meters after this functionality is enabled. Initially a one-way VHF paging signal will be used to control

³ Pepco currently plans to use the same program name in its District of Columbia service territory.

cycling activities. Over time, the use of the VHF paging signal will be replaced with communications through the meter. At this time, the Company believes that the communication link between AMI meters and the DLC device will ultimately be provided through a Home Area Network at customer homes. In addition, the AMI System will enable the Company to gather PJM required load research data, validating program load impacts, verifying that DLC equipment is functioning in the manner expected, and identifying where utility service visits to the DLC equipment are needed.⁴

Under the program, Pepco proposes to offer all District of Columbia residential distribution customers with central air conditioners or central heat pumps the choice of the installation of an outdoor cycling switch or an indoor smart programmable thermostat (collectively, “DLC equipment”).⁵ This choice of DLC equipment is intended to encourage maximum customer participation by accommodating different customer preferences as well as permitting the Company to manage the variety of equipment and wiring within residential customer homes. The installation of this equipment will permit the Company to reduce high summer electric demand through the cycling of residential central electric air conditioner and heat pump compressors. The DLC equipment will help customers to manage their energy use and to obtain financial benefits through the established dynamic pricing rates.

Pepco proposes to establish three alternative demand response program options for customers that are identical to the levels it has established in Maryland: 1) a 50 percent cycling program whereby a participating residential customer’s air conditioner compressor will be cycled

⁴ The Company’s ability to determine where Direct Load Control equipment has failed offers a significant operational improvement over the Company’s previously existing Direct Load Control program, “Kilowatchers.”

⁵ Program participation must be authorized by the owner of the property. Existing customer equipment must be compatible with Direct Load Control equipment.

off for up to 15 minutes of each half hour period⁶, 2) a 75 percent cycling program whereby a participating residential customer's air conditioner compressor will be cycled off for up to 22.5 minutes of each half hour period, and 3) a 100 percent cycling program whereby a participating residential customer's air conditioner compressor will be cycled off completely during each half hour period.⁷ Participant override of cycling events will be limited to two events per year, but not permitted during PJM required cycling events.

Pepco proposes to initiate cycling events at any time that beneficial load reductions are available through the program during those hours. Cycling may be initiated by the Company for any of the following reasons: 1) to test cycling equipment, 2) in response to a PJM dispatcher request to activate the program, 3) in response to local Pepco electric system constraints, 4) in response to regional energy market prices, or 5) during any future summer dynamic pricing critical peak periods. The Company will attempt to minimize customer program attrition by initiating cycle events only when necessary for any of the reasons listed above.

Pepco has competitively selected Comverge as its current residential DLC equipment and installation vendor. The selected DLC equipment consists of smart thermostats capable of supporting both heat pumps and central air conditioners. The smart thermostats act as programmable thermostats and are expected to be used by customers to automatically control their heating and cooling systems to reduce their energy consumption.⁸ Program participants will have the option of controlling the smart thermostats through the Internet, permitting temperature adjustments to the home from remote locations. The DLC equipment supports

⁶ This program option is similar to Pepco's prior Kilowatchers[®] Club Program, a residential cycling program. The new program will use currently available technology.

⁷ This program option is similar to Pepco's prior Kilowatchers PlusSM Program, a residential cycling program. The new program will use currently available technology.

⁸ The deployed smart thermostats will be second generation Comverge thermostats. These thermostats are capable of displaying more information through a larger display and will not contain a battery.

varying compressor cycling strategies and temperature setback. The use of an adaptive algorithm permits the Company to reduce compressor load based upon recent compressor load cycling patterns at each customer's home, and use elsewhere has shown that this method provides somewhat better participant comfort level while delivering the targeted load reductions. The new equipment is uniquely addressable, permitting the Company to avoid a costly field visit to respond to a participant's request to modify their selected cycling strategy or their request to no longer participate in the program.

In the event that a participant leaves the program, the Company will no longer cycle the air conditioner/heat pump compressor and will no longer pay the customer bill credits. If an exiting participant does not request Pepco to remove the DLC equipment, the Company proposes to have the option of leaving the equipment in place and to provide annual program re-enrollment marketing materials to the party responsible for the specific Pepco residential account.⁹ If the DLC equipment is left in place, Pepco's demand response infrastructure will be expanded over time, enabling the Company to rapidly respond to changing energy market conditions by encouraging re-enrollments by offering higher participant incentives. Non-participant customers with smart thermostats will be able to continue to program their smart thermostats to reduce both heating and cooling energy costs. In the event a participant leaves the program and the participant or the Company elects to remove the smart programmable thermostat, the customer shall be responsible for the purchase of a replacement thermostat.

Program Rollout

Marketing materials will be developed and participation recruitment activities will begin during the fourth quarter of 2011, assuming Commission approval of the program no later than

⁹ Each individual customer will only be eligible to receive one program enrollment credit per installed Direct Load Control device. Customers who subsequently purchase a home where an installed Direct Load Control device is already installed are not eligible for receipt of the initial program enrollment credit.

September 30, 2011. If this occurs, the installation of equipment is expected to begin during the first quarter of 2012, after the majority of AMI meters are deployed. At this time, the Company anticipates recruiting participants and installing equipment during 2012 and 2013. The timing of these activities is dependent upon the timing of Commission program approval, market receptivity, and third party vendor capability. The Company has assumed that half of the participants would be recruited into the program during 2012 and that half of the equipment would be installed during 2012. Pepco will make an effort to recruit and install equipment as rapidly as possible after receipt of Commission approval to implement the program and this could result in a higher amount of installed equipment during 2012. Pepco's projected program participation rate, resulting peak demand and resulting peak hour energy savings are contained in Table 1. The Company expects to enroll approximately 20 percent of all District of Columbia residential customers by 2012 based upon its historic Kilowatchers Program participation levels and the Company's available data on the penetration rate of central air conditioners and heat pumps.¹⁰ Pepco projects that 30 percent of participants will elect to receive an outdoor cycling switch and 70 percent of participants will elect to receive a smart thermostat. Fifty percent of participants are projected to select the 50 percent cycling option, 30 percent of participants are projected to select the 75 percent cycling option, and 20 percent of participants are projected to select the 100 percent cycling option. Achieved load reduction projections are based upon reduction estimates calculated through the most recent District of Columbia specific DLC statistical study approved by PJM and prepared by the Company. Initial PJM market peak load reduction bids are expected to be based upon these estimates.

¹⁰ The Company will seek participation rates in excess of 20 percent.

Table 1
Pepco Residential DLC Projected Year-end
Participants, Measures and Savings

Year	Participants	TStats	Switches	Total Measures	Peak Reductions (kW)	Annual Energy Savings (kWh)
2012	12,500	8,838	3,787	12,625	10,373	486,510
2013	25,000	17,675	7,575	25,250	24,895	1,167,624

Participant Financial Incentives

In an effort to rapidly enroll participants in the program, Pepco proposes to establish a one-time program enrollment bill credit for equipment installation. The recommended enrollment bill credit amounts per device are \$30 for the 50 percent cycling option, \$45 for the 75 percent cycling option, and \$60 for the 100 percent cycling option, which is proportionally similar to the enrollment credits in Pepco’s Maryland service territory. The District of Columbia has historically achieved smaller energy and demand reductions than Maryland because of the typically smaller air conditioning units and housing sizes. In exchange for these initial bill credits, participants will be required to remain enrolled in the program for a minimum period of one year. Pepco’s prior experience with residential cycling programs suggests that customers are likely to remain as program participants for many years after equipment is installed.

In the short-run, Pepco proposes to offer annual customer billing credits identical to the initial enrollment credit; i.e., \$30 for the 50 percent cycling option, \$45 for the 75 percent cycling option, and \$60 for the 100 percent cycling option. After AMI-enabled dynamic pricing is introduced in the District of Columbia, incentives amounts are expected to be determined through the dynamic pricing rate. Future dynamic pricing rates, if approved by the Commission, are expected to be based upon costs in the regional PJM capacity and energy market. The

Company will seek Commission authorization for any modification to customer billing credits prior to putting any changes into place.

Program Evaluation

The program will be formally evaluated after the second year of program operation and every three years thereafter to confirm program impacts and to provide the necessary information for recommended future program changes. Achieved electric energy and demand reductions will be determined based upon energy consumption data obtained from the deployed advanced metering system and adjusted for actual District of Columbia temperature and humidity conditions.¹¹

PJM Demand Response Market

PJM has established demand response market participation opportunities within the PJM capacity market. There are three capacity market opportunities at this time: 1) the annual Base Residual Auction (“BRA”) Reliability Pricing Model (“RPM”) capacity auction during early May for resources three years in the future; 2) Interim Year BRA capacity auctions; and, 3) bilateral transactions.

The recent PJM RPM capacity market results for Pepco’s region within PJM are presented in Table 2. Initially, due to uncertainty regarding the timing of program build out, 75 percent of the forecasted demand reduction amount will be bid into the forward RPM BRA capacity market and the remaining 25 percent will be bid into the BRA interim auctions.

¹¹ AMI metering will lessen the cost of gathering program load impact data.

Table 2
PJM Pepco Regional Capacity Market

Planning Year	RPM BRA \$/MW-Day
2012/2013	\$133.37
2013/2014	\$247.14
2014/2015	\$136.50

Two variants to the PJM energy market currently exist – day ahead and real time. At this time, the Company anticipates deriving energy related program revenue through the Pepco real time Zonal LMP prices. The value of achieved program energy reductions is calculated as follows:

$$\sum [(MWh \text{ Reduced}) * (\text{Hourly LMP})]$$

Load reduction amounts bid into the PJM capacity markets will be based upon forecasted program impacts that are available as of June 1 of each PJM planning year. Actual bid amounts will be less than forecast projections for a given year to account for uncertainty regarding such variables as customer participation levels and achieved equipment installation rates. Pepco's projections will be revised annually based upon reduction amounts actually achieved over the prior program year and any planned program modifications. Future statistical load reduction studies supported by AMI will be conducted in compliance with PJM market requirements.

Pepco anticipates that the first opportunity to participate in the PJM demand response market will occur during the summer of 2012 for the residential DLC program. Company participation in the capacity market during the 2012 summer will be through one of the following: 1) existing Pepco DR market positions, 2) bilateral transactions, and/or 3) through the available PJM RPM incremental auctions. The Company will be able to participate in the BRA action for 2015/2016 if Commission approval of the residential DLC program is received prior to

April 2012. All PJM related market earnings will be used to offset program costs. In the event that market earnings exceed program costs in a calendar year, those excess earnings amounts will be used to reduce the unamortized balance of program costs.

Projected Program Costs

Table 3.0 contains projected program costs over the period of 2011 through 2015. Actual program costs are expected to vary. Actual market participation rates will determine total equipment and installation expense and customer bill credit amounts. If Pepco is successful at recruiting more participants than projected and installing equipment more rapidly, actual program costs will be higher. The Company will notify the Commission when 25,000 customers have signed up to participate in the program.

**Table 3
Projected Program Costs**

Year	A Installed Devices	B Installed Cost of New Devices	C Marketing	D Contracted Support	E Participant Credits	F Program Administration	G Maintenance Services	H Evaluation	I Total Program Costs
2011	0	\$0	\$318,902	\$100,300	\$0	\$156,000	\$0	\$0	\$575,202
2012	12,625	\$2,797,700	\$1,594,508	\$401,200	\$511,313	\$260,000	\$83,931	\$50,000	\$5,698,651
2013	12,625	\$2,797,700	\$1,275,606	\$401,200	\$511,313	\$260,000	\$167,862	\$100,000	\$5,513,681
2014	0	\$0	\$100,000	\$140,420	\$0	\$195,000	\$167,862	\$50,000	\$653,282
2015	0	\$0	\$100,000	\$50,000	\$0	\$130,000	\$167,862	\$50,000	\$497,862
Total	25,250	\$5,595,400	\$3,389,016	\$1,093,120	\$1,022,625	\$1,001,000	\$587,517	\$250,000	\$12,938,678

Column (A) of Table 3 contains the installed number of devices. Column (B) contains the estimated costs for switches and thermostats in each year. Column (C) reflects the anticipated annual marketing expenses.¹² The estimated payments for contracted services performed by the vendor, such as marketing, installation management and scheduling, quality

¹² Marketing activities may include direct mail, paid advertising, and/or other approaches deemed necessary to attain targeted participation levels.

assurance, and any warranty issues, are found in Column (D). The estimated bill credits¹³ are shown in Column (E) and Column (F) shows projected yearly administrative costs.¹⁴ The Company's projected utility administrative expense includes dedicated personnel to respond to District of Columbia customer inquiries concerning demand response opportunities. Annual maintenance costs associated with installed switches and thermostats are shown in Column (G). Column (H) reflects measurement/verification and program evaluation costs and the annual totals for program costs are in Column (I).

Table 3.1 contains adjusted costs reflecting the Company's current estimate of the manner in which awarded Federal stimulus funds will be permitted offset program costs, net of Federal and local taxes. The descriptions of costs contained in columns A through H are identical to those contained in Table 3. The total amount of the stimulus award for this program is \$3,550,000 to support the installation of equipment. Although the Company does not expect any change to this amount, the final allocation of stimulus funds and their actual amounts will depend upon U.S. Department of Energy rules pertaining to this award. The Company's ability to obtain ARRA awarded funds are subject to near-term Commission program implementation approval.

Table 3.1
Projected Program Costs Net of Stimulus Funds¹⁵

Year	A Installed Devices	B Installed Cost of New Devices	C Marketing	D Contracted Support	E Participant Credits	F Program Administration	G Maintenance Services	H Evaluation	I Total Program Costs
2011	0	\$0	\$318,902	\$100,300	\$0	\$156,000	\$0	\$0	\$575,202
2012	12,625	\$1,747,788	\$1,594,508	\$401,200	\$511,313	\$280,000	\$83,931	\$50,000	\$4,648,739
2013	12,625	\$1,747,788	\$1,275,606	\$401,200	\$511,313	\$280,000	\$167,862	\$100,000	\$4,463,768
2014	0	\$0	\$100,000	\$140,420	\$0	\$195,000	\$167,862	\$50,000	\$653,282
2015	0	\$0	\$100,000	\$50,000	\$0	\$130,000	\$167,862	\$50,000	\$497,862
Total	25,250	\$3,495,576	\$3,389,016	\$1,093,120	\$1,022,626	\$1,001,000	\$687,617	\$260,000	\$10,838,853

¹³ Reflects installation credits and annual billing credits for 2012. Billing credits beginning in 2013 are assumed to be through AMI-enabled dynamic pricing. If a dynamic pricing rate is not available, annual bill credits shall be as stated.

¹⁴ Estimated customer credits currently reflect initial enrollment credits. Actual annual credits will be either through an AMI-enabled dynamic pricing rate or through an annual program credit amount.

¹⁵ ARRA funds are net of projected taxes.

Program Cost Effectiveness

Table 4 provides the results of the cost/benefit tests. The Company conducted the Total Resource Cost test and the Societal Cost Test. Pepco has made the following assumptions in these calculations:

- DLC Equipment Life: 15 Years
- Avoided Capacity Costs: Based on RPM BRA Auction Results for Years 2012, 2013, and 2014; thereafter moving to the Net Cost of New Entry beginning in year 2015
- Avoided Energy Costs: Assumed \$0.15 per kWh during cycling events
- Societal Cost Benefit Adder: \$0.0115 per kWh
- Price Mitigation: Estimated for years 2012, 2013, and 2014 only¹⁶
- Discount Rate for Total Resource Cost Test: 5.0 Percent¹⁷
- Discount Rate for Societal Cost Test: 3 Percent

The Total Resource Cost Test compares the total costs of the demand side program, including participant and utility costs, to the total benefits derived from the program, excluding the effect of externalities. The Societal Cost Test compares the total costs of the program to the total benefits derived from the program. The only difference in this test compared to the Total Resource Cost Test is that it uses a lower societal discount rate and it includes the impacts on externalities. Examples of the externalities include emissions costs, health benefits, and economic development. Accurately valuing these externalities is difficult, with estimates of externality values by various authors varying by orders of magnitude.¹⁸ Due to the difficulty of quantifying externalities without a detailed territory-specific assessment, an initial planning

¹⁶ The Brattle Group estimated price mitigation impacts for PHI and their likely duration.

¹⁷ Reflecting utility cost of capital adjusted to exclude inflation.

¹⁸ See, for example Electricity Externality Studies: Do the Numbers Make Sense, Thomas Sundqvist, 2000.

estimate of \$0.01/kWh was assumed for economic benefits, based in part on Oak Ridge National Laboratory summary of externalities for coal based generation,¹⁹ yielding a combined initial planning estimate of all societal externalities of \$0.0115/kWh. The Residential Direct Load program passes both tests. The DLC program is cost-effective with a Total Resource Cost benefit ratio of 1.58 without inclusion of price mitigation impacts and 2.40 with inclusion of estimated price mitigation impacts. It also passes the Societal Cost Test benefit ratio of 1.71 without price mitigation impacts and 2.49 with price mitigation impacts.

**Table 4
Cost Benefit Ratios**

PEPCO DC DLC Program Cost-effectiveness						
All Monetary values \$1,000s	Total Resource Cost Test			Societal Cost Test		
	Costs	Benefits	Ratio	Costs	Benefits	Ratio
Without Market Mitigation Effects	\$ 12,337	\$ 19,501	1.58	\$ 13,473	\$ 23,066	1.71
With Market Mitigation Effects	\$ 12,337	\$ 29,573	2.40	\$ 13,473	\$ 33,592	2.49

Market Mitigation Impacts²⁰

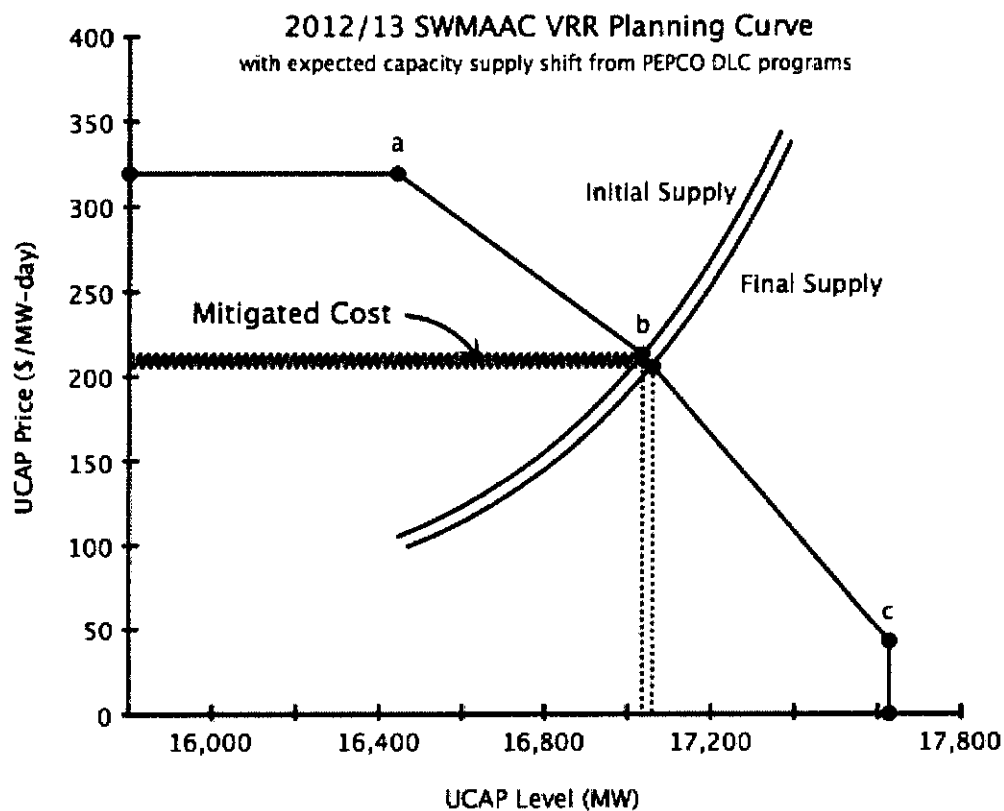
In addition to direct payments from capacity auctions, the DLC programs will also contribute to reduced capacity prices because of rightward shifts in the PJM determined capacity supply curve, since Demand Resources may be counted as increased capacity supply. An illustrative example of capacity price mitigation is shown graphically in Figure 1 below. The Variable Resource Requirement (“VRR”) Curve shown uses the specific values posted by PJM for the 2012/13 Southwest Mid-Atlantic Area Council (“SWMAAC”). The supply and demand curves demonstrate potential price and quantity changes resulting from Pepco’s District of

¹⁹ ORNL – 1994 – 1998, Russell Lee 2003.

²⁰ During 2007, Pepco retained the Brattle Group to support the Company’s business case for the deployment of Advanced Metering Infrastructure (“AMI”). The Brattle Group estimated the near-term price mitigation impact of peak demand reductions enabled by Pepco’s AMI deployment for Pepco’s District of Columbia customers. The results of that study indicate that each Megawatt of demand reduction provides \$6,927 to \$89,406 of energy price savings for District of Columbia customers and \$15,800 to \$194,235 of capacity price savings, depending on weather and fuel price conditions, and the speed at which suppliers delay investment in generation (or accelerate retirements) in response to reduced demand.

Columbia DLC programs. The indirect capacity cost mitigation effect²¹ is shown in the shaded area given by the intersections of the VRR Curve (which PJM constructs as its own demand curve for allocating BRA capacity market prices) and the demonstrated potential capacity supply curves. Resulting energy savings will also contribute to lower Locational marginal prices and thereby lower consumer energy costs throughout the delivery year, amounting to significant cost benefits accruing to the consumer as a result of these programs.

Figure 1



The shape of the VRR planning curve as developed by PJM for SWMAAC for the 2012/13 BRA is shown above. Point A has a given Unforced Capacity (“UCAP”) level of 16,441.6 MW at a price of \$319.53/MW-day. Point B has a UCAP level of 17,034.4 MW with a

²¹ Price mitigation affects will last for a limited number of years prior to the electricity market reaching a new equilibrium level. However, the capacity and energy resource value of the demand response resource will continue.

price of \$213.02/MW-day, and Point C has a UCAP level of 17,627.2 MW at \$42.60/MW-day. The change in price is calculated as the change in UCAP (25 MW) multiplied by the slope of the VRR curve at the initial equilibrium point. Assuming an initial equilibrium at point B, the increased capacity provided by the residential DLC programs presented herein would lie on segment BC of the VRR curve, where the slope is $(\$-0.29/\text{MW-day})/\text{MW}$. In this graph, the resulting cost mitigation is given by the shaded area – the area under the VRR curve between the initial and final price. This mitigation affect will last for a period of time, after which supply resources will adjust to the availability of new resources.

Utility Program Cost Recovery

For the residential DLC program, Pepco proposes to recover program costs through a newly established regulatory asset. Costs incurred for DLC implementation will be deferred in this regulatory asset and the Company will only receive cost recovery when it is authorized by the Commission to do so through a distribution base rate case. The Company proposes to amortize initial equipment installation and equipment expense (Column B in Table 3) over a fifteen year period reflecting projected equipment life, marketing/sign-up expense (Column C in Table 3) over a five year period, and ongoing O&M expense and credit expense on a annual basis (Columns D-G in Table 3).²² A return on the unamortized balance of the regulatory asset will be accrued on a monthly basis using the Company's allowed rate of return. As noted earlier, utility PJM market earnings from the program will be used to offset the annual program costs.

Conclusion

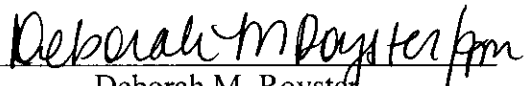
The residential DLC program proposed in this document will assist District of Columbia customers to better control their energy costs, help to mitigate wholesale electric energy and capacity prices for all customers, reduce resource requirements for electricity supply, and help to

²² These calculations are similar to those selected by the Maryland Commission.

preserve electricity reliability during high load periods. The program will be directly supported by Pepco's Planned Advanced Metering Infrastructure and Future Dynamic Pricing programs.

Respectfully submitted,

POTOMAC ELECTRIC POWER COMPANY

By: 
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Counsel for Potomac Electric Power Company

Washington, D.C.
June 15, 2011

Proposed



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DC

Electricity--P.S.C. of D.C. No. 1
Sixty-Second Revised Page No. R-1

RATE SCHEDULES

FOR

ELECTRIC SERVICE

IN THE

DISTRICT OF COLUMBIA



RATES AND REGULATORY PRACTICES GROUP

Date of Issue: June 15, 2011

Date Effective: Meters read on and after
January 1, 2012



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DC

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Original Page No. R-50

RESIDENTIAL DIRECT LOAD CONTROL

RIDER "R-DLC"

RIDER "R-DLC" – RESIDENTIAL DIRECT LOAD CONTROL

This rider is applied to and is a part of Schedules "R," "AE" and "R-TM" when a residential distribution customer volunteers for this demand response resource program subject to the following provisions:

1. The customer will allow the Company to install, own, and maintain either a smart thermostat(s) or radio controlled switch(es) and associated equipment on the customer's central air conditioner or central heat pump equipment for the purpose of the Company's cycling control over the operation of those appliances as described below.
2. Customer may select one of the following three demand response options:
 - RESIDENTIAL DLC-50% CYCLING - Whereby a participating residential customer's air conditioner compressor will be cycled off for 15 minutes of each half hour period.
 - RESIDENTIAL DLC-75% CYCLING - Whereby a participating residential customer's air conditioner compressor will be cycled off for 22.5 minutes of each half hour period.
 - RESIDENTIAL DLC-100% CYCLING - Whereby a participating residential customer's air conditioner compressor will be cycled off completely during each half hour period.
3. The Company may exercise cycling control whenever required for any of the following reasons:
 - 1) to test cycling equipment;
 - 2) in response to a PJM dispatcher request to activate the program;
 - 3) in response to local Pepco electric system constraints; or
 - 4) in response to regional energy market prices.

Participant override of cycling events will be limited to two events annually and are not permitted during PJM initiated cycling events.

4. The customer will receive the following applicable bill credits while participating in the program. The Annual Fixed Credit is paid proportionally during the June through October billing months. In exchange for the One Time Enrollment Installment Credit, participants will be required to remain enrolled in the program option for at least one year. The Enrollment Credit will be credited to the participant after the cycling equipment has been installed. The annual fixed credits will be revised when AMI enabled dynamic pricing is available.

Demand Response Options Per Controlled Device

	DLC-50%	DLC-75%	DLC-100%
One Time Enrollment Installment Credit	\$30.00	\$45.00	\$60.00
Annual Fixed Credit	\$30.00	\$45.00	\$60.00

5. The Customer holds Pepco harmless for any damages resulting from participation in the program.

Date of Issue: June 15, 2011

Date Effective: Meters read on and after
January 1, 2012

Redlined



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Electric--P.S.C. of D.C. No. 1
Original Page No. R-50

RESIDENTIAL DIRECT LOAD CONTROL

RIDER "R-DLC"

RIDER "R-DLC" – RESIDENTIAL DIRECT LOAD CONTROL

This rider is applied to and is a part of Schedules "R", "AE" and "R-TM" when a residential distribution customer volunteers for this demand response resource program subject to the following provisions:

1. The customer will allow the Company to install, own, and maintain either a smart thermostat(s) or radio controlled switch(es) and associated equipment on the customer's central air conditioner or central heat pump equipment for the purpose of the Company's cycling control over the operation of those appliances as described below.
2. Customer may select one of the following three demand response options:
 - RESIDENTIAL DLC-50% CYCLING - Whereby a participating residential customer's air conditioner compressor will be cycled off for 15 minutes of each half hour period.
 - RESIDENTIAL DLC-75% CYCLING - Whereby a participating residential customer's air conditioner compressor will be cycled off for 22.5 minutes of each half hour period.
 - RESIDENTIAL DLC-100% CYCLING - Whereby a participating residential customer's air conditioner compressor will be cycled off completely during each half hour period.
3. The Company may exercise cycling control whenever required for any of the following reasons:
 - 1) to test cycling equipment,
 - 2) in response to a PJM dispatcher request to activate the program,
 - 3) in response to local Pepco electric system constraints, ~~or~~
 - 4) in response to regional energy market prices, ~~or~~
 - 5) ~~during all summer dynamic pricing critical peak periods.~~

Participant override of cycling events will be limited to two events annually and are not permitted during PJM initiated cycling events.

4. The customer will receive the following applicable bill credits while participating in the program. The Annual Fixed Credit is paid proportionally during the June through October billing months. In exchange for the One Time Enrollment Installment Credit, participants will be required to remain enrolled in the program option for at least one year. The Enrollment Credit will be credited to the participant after the cycling equipment has been installed. The Annual Fixed Credits will be revised when AMI enabled dynamic pricing is available.

Demand Response Options Per Controlled Device

	DLC-50%	DLC-75%	DLC-100%
One Time Enrollment Installment Credit	\$40.00	\$60.00	\$80.00
Annual Fixed Credit	\$30.00	\$45.00	\$60.00

5. ~~Cost recovery established through Rider "DSM." The Customer holds Pepco harmless for any damages resulting from participation in the program.~~
6. ~~The Customer holds Pepco harmless for any damages resulting from participation in the program.~~
7. ~~The customer credit for participation in this program will be provided through the applicable Dynamic Pricing rate.~~

Date of Issue: ~~January 19, 2010~~ June 15, 2011

Date Effective: Meters read on and after
June 1, 2011 January 1, 2012

CERTIFICATE OF SERVICE

I hereby certify that on this 15th day of June 2011, a copy of Potomac Electric Power Company's Response to Order No. 16109 was served on all parties in Formal Case No. 1070 by first class mail, postage prepaid.

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