PUBLIC SERVICE COMMISSION OF MARYLAND

The EmPOWER Maryland Energy Efficiency Act STANDARD REPORT OF 2015

With Data for Compliance Year 2014

In compliance with Section 7-211 of
the Public Utilities Article,
Annotated Code of Maryland

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April 2015

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Report Contents

This document constitutes the 2015 annual report of the Public Service Commission of Maryland regarding the EmPOWER Maryland Energy Efficiency Act ("EmPOWER Maryland"). This Report is submitted in compliance with §7-211 of the Public Utilities Article, *Annotated Code of Maryland* ("PUA"). PUA §7-211 requires that, on or before March 1 of each year, the Commission, in consultation with the Maryland Energy Administration ("MEA"),[1] shall report to the General Assembly on the following:

1. the status of programs and services to encourage and promote the efficient use and conservation of energy, including an evaluation of the impacts of the programs and services that are directed to low-income communities, low- to moderate-income communities to the extent possible, and other particular classes of ratepayers;
2. a recommendation for the appropriate funding level to adequately fund these programs and services; and
3. in accordance with subsection (c) of this section, the per capita electricity consumption and the peak demand for the previous calendar year.

The EmPOWER Maryland Act declares that it is the goal of the State to achieve a 15% reduction in per capita electricity consumption and a 15% reduction in per capita peak demand by the end of 2015, derived from a 2007 electricity consumption baseline. As mandated by the EmPOWER Maryland Act, the electric utilities are responsible for a 10% reduction in the per capita electricity consumption within their respective service territories,[2] as well as the entirety of the 15% per capita peak demand reductions targeted by the end of 2015. In compliance with PUA §7-211, topics addressed in this report include a summary of: the Energy Efficiency & Conservation ("EE&C") and Demand Response ("DR") program achievements; progress pertaining to the Advance Metering Infrastructure ("AMI") initiatives; and information on forthcoming milestones.

Executive Summary

The Commission reviews the progress of EmPOWER programs on a semi-annual basis, typically in April to review the results of the third and fourth quarters of the previous year and in October to review the results of the first and second quarters of the current year. The Commission held a legislative-style hearing on April 7 and 8, 2014 to review the semi-annual EmPOWER reports filed by the EmPOWER Maryland Utilities[3] (hereinafter, "Utilities") and by the Maryland Department of Housing and Community Development ("DHCD"). On May 28, 2014, the Commission issued Order No. 86366, which addressed requests for program modifications, budget adjustments, and new program offerings, as well as recommendations

[1] MEA has been an active participant in the stakeholder process and continues to be an active participant in the ongoing EmPOWER Plan enhancement meetings.
[2] The EmPOWER Maryland Act calls for MEA to provide 5% of the 15% per capita energy consumption reduction goal by 2015.
[3] The EmPOWER Maryland Utilities are: The Potomac Edison Company ("PE"); Baltimore Gas & Electric Company ("BGE"); Delmarva Power & Light Company ("Delmarva" or "DPL"); Potomac Electric Power Company ("Pepco"); and Southern Maryland Electric Cooperative ("SMECO").

pertaining to programmatic improvements. In recognition of projections that the program modifications and budget adjustment requests would result in appropriate and cost-effective incremental energy savings and demand reductions, the Commission approved budget increases of over $58 million through the remainder of the program cycle. Approximately $17.8 million of the additional funding was earmarked for residential programs and approximately $40.3 million was targeted for commercial and industrial programs, with the collective additional funding estimated to achieve an incremental 55,000 megawatt hours ("MWh") of annualized energy savings and 8.330 megawatts ("MW") of demand reductions.

In the same May 28, 2014 Order, the Commission also approved several new programs for the residential and commercial portfolios, including a residential Natural Gas Conversion pilot and the ENERGY STAR Multifamily Low-Rise New Construction program. Finally, the Commission directed the EmPOWER Utilities, Staff, the Office of People's Counsel ("OPC"), MEA, DHCD, and any other interested parties to convene a Limited-Income Work Group to provide findings and recommendations pertaining to the implementation of limited-income programs. In response to this directive, the Limited-Income Work Group filed a report on September 2, 2014 that included implementation recommendations derived in part from the Utilities' experience operating limited-income programs in other jurisdictions.

In addition to implementing EmPOWER programs for the remainder of the 2012 – 2014 program cycle, throughout 2014 the Utilities, Staff, MEA, and OPC met with stakeholders to discuss the design of the 2015-2017 EmPOWER Maryland program cycle. In accordance with the statute, the Utilities filed their plans by September 2, 2014, which provided details regarding the Utilities' proposals for achieving incremental electricity savings and demand reductions. The Commission held a legislative-style hearing during the week of October 20 - 24, 2014 to consider the Utilities' proposals, during which the Commission received testimony from over 20 stakeholder groups pertaining to the filed program plans.[4]

On December 23, 2014, the Commission issued Order No. 86785, authorizing BGE, PE, Pepco, DPL, and SMECO to begin transitioning into the next three-year program cycle.[5] The Commission also authorized DHCD to continue its implementation of the EmPOWER Maryland limited-income programs in calendar year 2015.[6] Furthermore, the Commission granted the application of Washington Gas Light Company ("WGL") for approval of its natural gas energy efficiency and conservation program, as well as the accompanying cost recovery mechanism.[7] Overall, the Utilities' 2015-2017 EmPOWER Maryland portfolio is projected to achieve incremental energy savings of 2.3 million MWh and demand savings of 1,666 MW by the end of 2017 at a cost of $965 million.

In Order No. 86785, the Commission also directed the various EmPOWER Maryland work groups to investigate 15 specific tasks designed to improve EmPOWER programmatic performance, with tasks ranging from investigating the appropriate incentive structure of the small business program to pursuing alternative methods to provide energy efficiency education

[4] As part of this hearing, the Commission also reviewed the semi-annual reports submitted by the EmPOWER Maryland Utilities and by DHCD regarding programmatic achievements during the first half of 2014.
[5] 2015-2017 Program Cycle.
[6] The DHCD 2015 portfolio is projected to achieve incremental energy savings of 15,750 MWh at a forecasted cost of $27.8 million.
[7] The WGL 2015 – 2017 portfolio is forecasted to spend $6.9 million and projected to achieve 28.2 million therms of energy savings.

through schools in the State. The majority of the tasks have a reporting date of April 15, 2015 and will be reviewed as part of the Commission's spring semi-annual hearings. Lastly as part of the Order, the Commission requested stakeholder feedback regarding future cost-effectiveness screening methodologies and the development of post-2015 energy efficiency goals. Hearings for these two issues were held February 12 and 13, 2015.

In early February 2015, the Utilities and DHCD submitted semi-annual reports detailing programmatic performance for the latter half of 2014. According to these filings, incremental energy savings reported in 2014 surpassed the one million MWh threshold, marking the second straight program year for this achievement and exceeding the progress reported in 2013 by 11%. Collectively, the Utilities' continued progress during 2014 translates into 80% of the 2015 EmPOWER Maryland energy reduction goal. Although at the end of 2014 the Utilities were approximately 20% short of the 2015 energy reduction goal, the goal remains attainable if the Utilities can perform comparably to the prior two years. This would require the Utilities to achieve energy reductions of 1.095 million MWh in 2015, slightly less than the 1.177 million MWh energy savings reported in 2014.

Similarly, the 2015 demand reduction goal remains attainable on a statewide basis judging by recent performance trends. However, based solely on currently approved EmPOWER programs, the Utilities may be challenged to fully realize the 10% per-capita reduction in energy usage and the 15% per-capita reduction in peak demand by the end of 2015.[8] As has been discussed in prior reports, dynamic pricing programs will need to make a significant contribution in order for the Utilities to achieve the 2015 peak demand reduction goals. With the addition of dynamic pricing programs, the Utilities achieved 121% of the 2014 demand reduction target and 82% of the 2015 demand reduction goal over the past year.[9] Absent demand reductions from dynamic pricing programs, however, peak demand reductions would have fallen short of 2014 forecasts, as the utility Direct Load Control ("DLC") programs have reached saturation levels (the number of actual participants is approaching the number of expected program participants). Pepco and BGE reported a combined 334 MW of peak demand reductions (Pepco – 125 MW; BGE – 209 MW) from their smart grid-enabled dynamic pricing programs.[10] In the summer of 2014, DPL administered a 5,000 customer pilot, but has not yet reported demand savings stemming from its dynamic pricing program.[11]

[8] *See* Table 2 for a compilation of forecasted energy savings and demand reductions as a percentage of the Utilities' 2015 goals, derived from the Commission-approved 2015 – 2017 program cycle plans.

[9] Without the MW reduction attributed to the dynamic pricing program, the utilities would not have met their 2014 peak demand reduction target (at 47%), and only 81% of the 2015 EmPOWER Maryland peak demand reduction goal.

[10] Demand reductions from dynamic pricing represent a snapshot for a particular time-period and are dependent upon customer engagement and participation; therefore, demand reductions attributable to dynamic pricing programs may change year-to-year.

[11] DPL expects to fully implement its dynamic pricing program in 2015.

Initiative Highlights

- Program-to-date, the Utilities' EmPOWER Maryland programs have saved a total of 4,379,939 MWh and 1,743 MW (see Table 1 on the following page for individual utility achievements).[12] This translates into over 35.8 billion kilowatt-hours ("kWh") saved over the lifetime of the installed measures, which is equivalent to $4.089 billion in lifetime energy bill savings.

- Across all Utilities, the lifecycle cost per kWh for the EE&C programs across is $0.026 per kWh – significantly lower than the current cost of Standard Offer Service ("SOS"), which ranges from $0.062 to $0.093 per kWh.

- Program-to-date, the Utilities have spent over $1.411 billion on the EmPOWER Maryland programs, including approximately $923 million on EE&C programs, and $488 million on DR programs.

- EmPOWER EE&C programs continue to be cost effective on a statewide basis, with a statewide Total Resource Cost ("TRC") score of 1.81 verified for program year 2013. For every dollar of utility or participant cost, the EE&C programs generate approximately $1.81 in benefits.

- Program-to-date, 16,795 limited-income customers participated in EmPOWER Maryland through the Residential Limited-Income Programs. Of the program-to-date participants, 5,297 limited-income households participated in 2014, representing 32% of the total participants to-date. The average savings per participant is 2,995 kWh per year. Program-to-date spending on Limited-Income programs is $88.6 million, which accounts for 21% of the total cost of the Utilities' residential portfolios.

- The average monthly residential surcharge bill impacts[13] for 2014 were as follows:

	EE&C	DR	Dynamic Pricing[14]	Total
BGE	$2.74	$1.09	$0.28	$4.11
Pepco	$3.20	$0.02	$0.48	$3.70
DPL	$2.49	$0.53	N/A	$3.02
PE	$4.41	N/A	N/A	$4.41
SMECO	$3.81	$2.39	N/A	$6.20

[12] Table 1 displays energy savings at the Gross Wholesale level. Energy savings reported at the Gross Wholesale level do not include Net-to Gross ratios, which are used by the Commission's independent evaluator to assess the cost effectiveness of a program.

[13] Bill impacts are calculated assuming an average residential monthly usage of 1,000 kWh. The calculated bill impact does not reflect savings produced by EmPOWER Maryland programs through reduced customer usage or energy rate reductions due to reduced system demand.

[14] The difference between rebates paid to participants and revenues received from PJM markets are trued-up in the subsequent calendar year review of the EmPOWER Maryland surcharge. Therefore, the 2014 dynamic pricing bill impacts include true-up costs associated with the Peak Time Rebate program offered by Pepco and BGE in the summer of 2013. The bill impact for Dynamic Pricing is expected to decrease in future years as PJM Capacity payments will be available to offset the peak time rebate bill credits.

Table 1. EE&C and Demand Response Reported Achievements

	2014 Reported Reduction*	Program-to-Date Reduction**	2012-2014 Interim Target***	Percentage of 2015 Goal
BGE				
Electric Consumption (MWh)	478,031	2,230,161	87%	62%
Demand Reduction (MW)	269.873	987.809	97%	78%
Pepco				
Electric Consumption (MWh)	382,828	1,162,360	81%	94%
Demand Reduction (MW)	224.286	516.936	127%	77%
PE				
Electric Consumption (MWh)	142,763	495,264	101%	119%
Demand Reduction (MW)	19.589	75.416	108%	359%
DPL				
Electric Consumption (MWh)	118,926	271,180	77%	189%
Demand Reduction (MW)	21.688	76.985	44%	428%
SMECO				
Electric Consumption (MWh)	54,677	220,975	117%	263%
Demand Reduction (MW)	12.790	85.740	99%	62%
Total				
Electric Consumption (MWh)	1,177,225	4,379,939	87%	80%
Demand Reduction (MW)	548.225	1,742.885	102%	82%

*Based on preliminary energy and demand savings from semi-annual programmatic reports. These savings will be verified through an EM&V process.

** Program-to-date reported reduction includes savings contributions from Fast Track Programs, which were Lighting and Appliance Rebate programs that began before the EmPOWER Maryland Law was enacted, beginning January 1, 2008.

*** Percentage of energy savings forecasted from individual utility plans.

EmPOWER Maryland Portfolios

For the 2012 – 2014 program cycle, the Commission directed Maryland's electric investor-owned utilities and SMECO to meet the EmPOWER Maryland goals through a diverse array of cost-effective solutions for its Maryland ratepayers, which can include EE&C, DR, distributed generation, and AMI or Smart Grid opportunities.[15] While the EmPOWER Maryland Act mandates that the Commission require each gas and electric utility to establish energy

[15] Beginning in 2015, the Commission also directed WGL to implement natural gas energy efficiency and conservation programs.

efficiency programs, the directive is limited to those programs that the Commission deems appropriate and cost effective. Furthermore, the Commission must consider the impact on rates of each ratepayer class in determining whether to approve an energy efficiency program. Taken together, cost-effectiveness and the projected impact on ratepayers may explain in part why the Utilities' approved plans are not expected to meet or surpass the EmPOWER Maryland 2015 goals. Other statutory factors that the Commission must consider in determining whether an energy efficiency program is appropriate include the impact on jobs and on the environment.[16]

Prior to approving the 2012-2014 EmPOWER Maryland plans, the Commission estimated the share of the 2015 EmPOWER Maryland energy and demand savings goals for each electric company's service territory.[17] Individual utility achievement as a percentage of the 2015 goals is projected in Table 2 using: program-to-date verified savings (2009 – 2013); reported savings for 2014; and forecasted savings for 2015, based on the 2015-2017 EmPOWER program plans.[18] In aggregate, the forecasted reductions included in the Commission-approved 2015-2017 plans indicate that the Utilities are expected to come close to achieving the statewide energy savings and peak demand reduction goals for 2015 (97% and 95%, respectively).

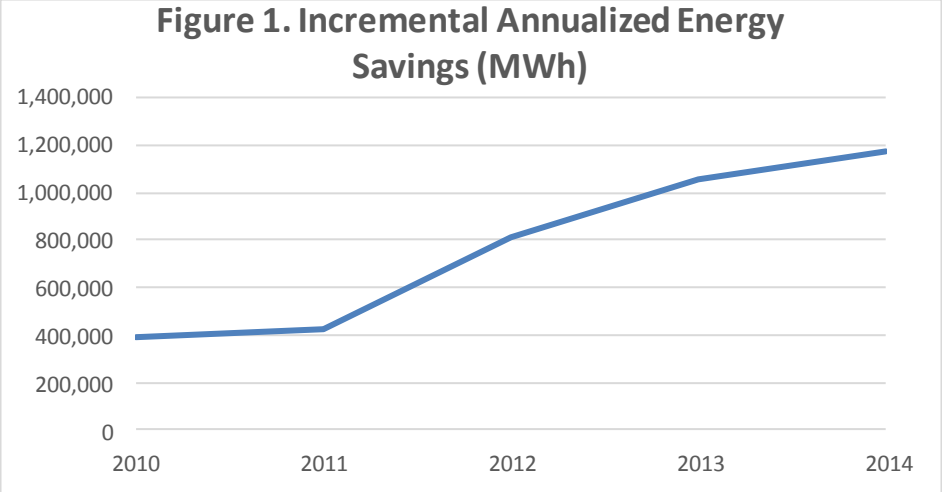
Table 2. EE&C and Demand Response Forecasted Achievements in 2009-2015 EmPOWER Plans (as a Percentage of EmPOWER Maryland Goal)

	Total Annualized Energy Savings Forecasted (MWh)	Percentage of Annualized Energy Savings Compared to the 2015 Goal	Total Coincident Peak Demand Reduction Forecasted (MW)	Percentage of Coincident Peak Demand Reduction Compared to the 2015 Goal
BGE	2,725,984	76%	1088.301	86%
Pepco	1,384,651	112%	636.337	95%
PE	563,510	136%	85.516	407%
DPL	331,846	231%	108.850	605%
SMECO	291,853	348%	96.600	69%
Total	**5,297,843**	**97%**	**2,015.604**	**95%**

As indicated in Table 2 above, based solely on currently approved EmPOWER programs, the Utilities are projected to come close – but may ultimately be challenged – to fully realize the statewide goal of the 10% per-capita reduction in energy usage and the 15% per-capita reduction in peak demand by the end of 2015. The forecasted achievement gap is attributable to several factors, including the delayed start of some programs and the slow ramp-up rate of others.[19] However, judging by the accelerated progress demonstrated by the Utilities in 2013 and 2014, the Utilities are now within reasonable reach of meeting the 2015 goals. Figure 1 illustrates the

[16] PUA §7-211(i)(1). The Commission shall consider the: cost-effectiveness; impact on rates of each ratepayer class; impact on jobs; and impact on the environment.
[17] *Notice of EmPOWER Maryland Plan Consumption and Demand Reduction Targets*, issued August 15, 2008.
[18] Based on revised 2015-2017 ES tables filed on February 13, 2015.
[19] The delayed start for some of the Utilities' programs is because the Commission directed Pepco, PE, DPL, and SMECO to refile the 2009 – 2011 program cycle plans with updated cost information based on final selection of implementation contractors to better judge the overall costs and cost effectiveness of the proposals.

trend of increasing incremental annualized energy savings since the EmPOWER Maryland program inception.



In order to verify the Utilities' energy and peak demand savings resulting from individual EE&C and DR programs, the Commission has developed an independent, third-party Evaluation, Measurement & Verification ("EM&V") process for the EmPOWER programs consistent with national best practices. See the "Evaluation, Measurement & Verification" section herein for further information.

EE&C Programs

As mandated by the EmPOWER Maryland Act, the Utilities are responsible for a 10% reduction in the per capita electricity consumption within their respective service territories,[20] as well as the entirety of the 15% per capita peak demand reductions targeted by the end of 2015. To generate these savings, the five Utilities each developed EE&C and DR portfolios beginning with the three-year 2009 – 2011 program cycle. On December 22, 2011, the Commission approved plans for the 2012 – 2014 program cycle in Order No. 84569; the Commission approved plans for the 2015 – 2017 program cycle on December 23, 2014 in Order No. 86785.

The Utilities' EmPOWER Maryland core EE&C program offerings are similarly designed with standardized customer incentives across the State, albeit with some variation in execution based upon the demographic of the service territory. Residential EE&C programs include discounted light-emitting diodes ("LEDs"), compact fluorescent lights ("CFLs"), and appliances; heating, ventilation, and air conditioning ("HVAC") rebates; home energy audits; weatherization; and low-income programs.[21] Commercial and industrial EE&C programs are designed to encourage businesses to upgrade to more efficient equipment, such as lighting or HVAC retrofits, or to improve overall building performance through weatherization and building

[20] The EmPOWER Maryland Act calls for MEA to provide 5% of the 15% per capita energy consumption reduction goal by 2015.
[21] Other than the volumetric surcharge collected from all ratepayers, limited-income programs are offered at no additional cost for those who qualify.

shell upgrades. For larger commercial buildings or industrial facilities, a utility can customize its program offerings for cost-effective improvements.

As the Utilities transition into the 2015 – 2017 EmPOWER Maryland program cycle, there are several changes to evaluation parameters, building codes, and efficiency standards that will reduce the incremental energy and demand savings for installing efficient lighting, appliances, and equipment. The following list provides some examples of these impacts, although it does not represent an exhaustive compilation of pending changes to codes and standards. Some of these baseline changes result in reduced savings potential available from historically-predominant EmPOWER Maryland programs, such as lighting-based programs.

- Energy Independence and Security Act ("EISA") lighting standards are fully implemented and lighting companies are no longer manufacturing 40 watt to 100 watt incandescent light bulbs in the United States.
- As a result of efficient lighting installations in infrequently used sockets, the reduced Hours of Use ("HOU") will reduce energy savings for future lighting program evaluation.[22]
- Increased energy efficiency standards for refrigerators and freezers were finalized on September 15, 2014.
- Clothes washers will undergo two increases in efficiency standards over the next three years, with the first revision effective between March 7, 2015 and January 1, 2018. The second increase will take effect on January 1, 2018.
- In 2012, Maryland adopted the American Society of Heating and Air-Conditioning Engineers ("ASHRAE") 2010/International Energy Conservation Code ("IECC") 2012 code requirements, which increased minimum building codes by 15% over the IECC 2009 code.

[22] The evaluation of lighting programs is reporting an increase in the number of efficient lighting installations occurring in less frequently used rooms, likely attributable to the saturation of efficient lighting in more frequently used areas. This trend drives down the metric of overall Hours of Use. Current preliminary EM&V results for program year 2014 demonstrate a reduction in HOU from 3 hours per day to 2 hours per day.

BGE

BGE's current EmPOWER Maryland portfolio is designed to save approximately 2.7 million MWh and nearly 1,100 MW by the end of 2015.[23] The Company continues to achieve the greatest quantity of energy savings and demand reductions to-date.

BGE's Residential Lighting program continues to provide a majority of the energy savings realized by the Residential EE&C portfolio, accounting for 79% of portfolio energy savings on both a cycle-to-date and program-to-date basis. However, BGE projects a downward trend in savings derived from this program beginning in 2015, shrinking the Residential Lighting portfolio contribution to 69% (a reduction of 12.7% from 2014). As previously discussed, the HOU for efficient lighting has decreased over the course of program implementation due to the saturation of efficient lighting and the resulting fewer opportunities to replace high energy use bulbs. The effect of this, coupled with the full implementation of EISA, is quite apparent within the Residential Lighting program's projected future performance.

Other notable contributions to the Company's Residential EE&C portfolio in 2014 came from the Appliance Recycling program, which surpassed forecasted participation and energy savings in 2014 by 26% and 23%, respectively. During the 2012 – 2014 program cycle, BGE recycled 23,000 inefficient appliances.

BGE EmPOWER Programs

Residential Programs

- Appliance Rebate
- Appliance Recycling
- Natural Gas Conversion Pilot Program
- Home Performance with Energy Star
- HVAC
- Lighting
- Multi-Family New Construction
- New Homes
- Quick Home Energy Check-up

Commercial Programs

- Benchmarking
- Custom
- New Construction
- Prescriptive
- Retro-commissioning
- Small Business Solutions
- Combined Heat and Power
- Building Operator Certification*
- Energy Analytics & Customer Engagement*
- Master-Metered Multi-Family*
- Small Business Behavior Pilot*
- Upstream Lighting*

*New Program for 2015-2017 Cycle

While BGE's Commercial programs yielded 33,000 fewer MWh of energy savings in 2014 compared to 2013, the savings directly attributable to the EmPOWER programs decreased in part due to the State's adoption of more stringent ASHRAE 2010/IECC 2012 Code requirements rather than as a function of program performance. In fact, participation in the Company's C&I programs actually increased by 35% from 2013 to 2014.

[23] BGE has several additional programs, not funded through the EmPOWER Maryland surcharge, that contribute energy and demand savings toward the 2015 EmPOWER goal, including: streetlights, high-efficiency transformers, dynamic pricing, and behavior-based programs. BGE also completed a conservation voltage reduction pilot in 2014 involving 14 feeders. Furthermore, the Commission will allow additional verified savings resulting from the Exelon – Constellation merger customer investment fund programs to be counted under the EmPOWER umbrella, which will bring the combined Utilities closer to the 2015 EmPOWER goals.

As noted in Table 3, BGE's EmPOWER portfolio[24] reported an incremental 478,031 MWh of energy savings in 2014 – an achievement of 86% of its interim 2014 electric consumption reduction target. BGE's EmPOWER portfolio also reported an incremental 269.873 MW of demand reductions, thereby achieving 124% of its 2014 demand reduction target, primarily due to the 209 MW of reported demand savings from the smart grid enabled dynamic pricing program.[25] Transitioning into the 2015 – 2017 program cycle, the dynamic pricing program will serve an increasingly important role in achieving the Company's demand reduction targets, as the BGE PeakRewards program has plateaued in the amount of total demand reductions achievable year-over-year.

Table 3. BGE Energy Savings Interim Reported[26] Achievements

	2014 Electric Consumption Reduction (MWh)	**Percentage of 2014 Target***	**Program-to-Date Electric Consumption Reduction (MWh)**	**Percentage of 2015 Goal**
EmPOWER Maryland Targets**	553,660	86%	3,593,750	62%
BGE Portfolio of Programs	478,031		2,230,161	

*Percentage of energy savings forecasted for the year compared to actual savings.
**EmPOWER Maryland reduction targets are based upon the individual EmPOWER Maryland filings of each utility.

[24] The BGE EmPOWER portfolio includes savings contributions from the lighting and appliance rebate Fast Track Programs, which were in place beginning January 1, 2008 (prior to the enactment of the EmPOWER Maryland Act).
[25] Demand reductions from dynamic pricing represent a snapshot for a particular time period and are dependent upon customer engagement and participation; therefore, demand reductions attributable to dynamic pricing programs may change year-to-year. Although both programs are voluntary, the dynamic pricing program is different from the PeakRewards program for which BGE pays a customer an incentive so that the utility may directly control the customer's central air conditioner during a pre-defined event. Direct load control programs represent a repeatable MW reduction potential.
[26] "Reported" savings constitute unverified energy savings and demand reductions based on the Utilities' quarterly programmatic reports. An independent, third-party verification of savings is conducted annually.

Table 4. BGE Peak Demand Reduction Interim Reported Achievements[27]

	2014 Peak Demand Reduction (MW)	Percentage of 2014 Target*	Program-to-Date Peak Demand Reduction (MW)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	217.929	124%	1,267.000	78%
BGE Portfolio of Programs	269.873		987.809	

*Percentage of demand savings forecasted for the year compared to actual savings.
**EmPOWER Maryland reduction targets are based upon the individual EmPOWER Maryland filings of each utility.

[27] The demand reduction interim targets and reported achievements include peak demand reductions generated by both EE&C and DR programs, as both components contribute toward achieving the Utilities' overall 2015 peak reduction goals.

Pepco

Pepco's current EmPOWER Maryland portfolio is designed to save approximately 1.4 million MWh and nearly 636 MW by the end of 2015.[28] According to Company forecasts, Pepco is on track to exceed its 2015 energy savings goal and may also achieve its 2015 demand reduction goal.

Pepco EmPOWER Programs

Residential Programs

Appliance Rebate

Appliance Recycling

Behavior Based

Home Performance with Energy Star

HVAC

Lighting

Multi-Family New Construction

New Homes

Quick Home Energy Check-up

Commercial Programs

Combined Heat and Power

Custom

Master Meter and Multi-Family New Construction

Prescriptive

Retro-commissioning

Small Business

Master-Metered Multi-Family*

*New Program for 2015-2017 Cycle

In 2014, energy savings for the Commercial portfolio surpassed the energy savings for the Residential portfolio by over 45,000 MWh. The most successful of the Commercial portfolio offerings was the Small Business program, which reported energy savings of 115,111 MWh, or 55% of the total Commercial portfolio energy savings achieved in 2014. A contributing factor to the success of this program was the Small Business Energy Advance on-bill financing component, which extended 250 advances totaling $847,581 at an average advance of $3,390 per qualifying small business. Due to the high program participation and resulting energy savings, the Company requested and received Commission approval to increase the customer incentive budget by over $31 million to support the program through the end of 2014. Looking ahead to 2015 and the next EmPOWER Maryland program cycle, Pepco will modify its Small Business program to more closely align with the Small Business programs operated by the other Utilities, including: modifying the eligibility requirement from 100 kW to 60 kW per month (based on the customer's maximum demand over the previous 12 months); and capping the program incentives at 80% of the total project cost.

Another successful Commercial program was the Retro-commissioning program that reported approximately 33,000 MWh of energy savings in 2014. The component that contributed a majority of the referenced savings (75%) was the O&M Training portion of the Retro-commissioning program. The O&M Training initiative provides building facility personnel up to $1,000 for training on appropriate measures for maintaining equipment in their facility. BGE proposed a similar training program as a stand-alone program for the 2015-2017 program cycle. The Commission will monitor the success of the BGE stand-alone program and Pepco's inclusion of the O&M Training initiative as part of the Retro-commissioning program, and will make appropriate adjustments to the design of this program as warranted.

[28] Pepco operates three additional programs, not funded through the EmPOWER Maryland surcharge, that contribute energy and demand savings toward the 2015 EmPOWER goal, including: streetlights, high-efficiency transformers, and dynamic pricing. Pepco also continued its conservation voltage reduction pilot in 2014, involving 68 feeders and serving approximately 57,600 customers.

In 2014, the Company's Residential programs generally did not meet forecasted metrics for participation and energy savings, experiencing a slight decline in performance compared to 2013. Given the rapid growth in energy savings reported by Pepco in 2012 and 2013, this drop in reported energy savings is not unexpected.

As noted in Table 5, Pepco's EmPOWER portfolio[29] reported an incremental 382,828 MWh of energy savings in 2014 – an achievement of 66% of its interim 2014 electric consumption reduction target. Pepco's EmPOWER portfolio also reported an incremental 224.286 MW of demand reductions, thereby achieving 153% of its 2014 peak demand reduction target, due in part to the 125 MW reduction from its smart grid-enabled dynamic pricing program.[30]

Table 5. Pepco Energy Savings Interim Reported[31] Achievements

	2014 Electric Consumption Reduction (MWh)	Percentage of 2014 Target*	Program-to-Date Electric Consumption Reduction (MWh)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	579,318	66%	1,239,108	94%
Pepco Portfolio of Programs	382,828		1,162,360	

* Percentage of energy savings forecasted for the year compared to actual savings.
**EmPOWER Maryland reduction targets are based upon the individual EmPOWER Maryland filings of each utility.

[29] The Pepco EmPOWER portfolio includes savings contributions from the lighting rebate Fast Track Program, which was in place beginning January 1, 2008 (prior to the enactment of the EmPOWER Maryland Act).
[30] Demand reductions from dynamic pricing represent a snapshot for a particular time period and are dependent upon customer engagement and participation; therefore, demand reductions attributable to dynamic pricing programs may change year-to-year. Although both programs are voluntary, the dynamic pricing program is different from the Energy Wise Reward program for which Pepco pays a customer an incentive so that the utility can directly control the customer's central air conditioner during a pre-defined event. Direct load control programs represent a repeatable MW reduction potential.
[31] "Reported" savings constitute unverified energy savings and demand reductions based on the Utilities' quarterly programmatic reports. An independent, third-party verification of reported savings is conducted annually.

Table 6. Pepco Peak Demand Reduction Interim Reported Achievements[32]

	2014 Peak Demand Reduction (MW)	Percentage of 2014 Target*	Program-to-Date Peak Demand Reduction (MW)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	146.632	153%	672.000	77%
Pepco Portfolio of Programs	224.286		516.936	

* Percentage of demand savings forecasted for the year compared to actual savings.
**EmPOWER Maryland reduction targets are based upon the individual EmPOWER Maryland filings of each utility.

[32] The demand reduction interim targets and reported achievements include peak demand reductions generated by both EE&C and DR programs, as both components contribute toward achieving the Utilities' overall 2015 peak reduction goals.

PE

PE's current EmPOWER Maryland portfolio is designed to save over 563,000 MWh and nearly 86 MW by the end of 2015.[33] According to Company forecasts, PE is on track to exceed its 2015 energy savings goal and has already exceeded its 2015 demand reduction goal.

Overall, PE's Residential programs performed at a slower pace in 2014 compared to 2013. Participation across the Residential portfolio dropped by approximately 2%, with reported energy savings decreasing by about 4%. However, in both 2013 and 2014, the Company's reported energy savings more closely aligned with its own forecasts than any of the other Utilities. A stand-out among its Residential portfolio was the Company's Behavior-based program, for which PE sent out over 70,000 home energy reports. The reported energy savings derived from the behavior-based program accounted for about 30% of the total Residential energy savings in 2014; the Residential Lighting program contributed 44% of the portfolio's energy savings. Given the growing prominence of the behavior-based program as an anchor of the Utilities' Residential portfolios, the Commission will monitor the persistence of behavior-based savings and messaging over time for all of the active behavioral programs across the Utilities.

PE EmPOWER Programs

Residential Programs

Appliance Rebate
Appliance Recycling
Behavior-Based
Energy Efficiency Kits
Home Performance with Energy Star
HVAC
Lighting
New Homes
Quick Home Energy Check-up

Commercial Programs

Combined Heat and Power
Custom
New Construction
Prescriptive
Retro-commissioning
Small Business

The Company's Commercial portfolio performed well in 2014, achieving 109% of the year's forecasted energy savings. As was the case in 2013, the Small Business and Prescriptive/Existing Buildings programs led the way for the Commercial programs, each of which exceeded energy savings forecasts by almost 12,000 MWh. The Small Business program has been exceeding expectations since the Company changed their implementation contractor in April 2013 and began focusing resources on customers with a monthly demand below 100 kW. Transitioning into the 2015 – 2017 program cycle, the Commission directed the Company to further modify its eligibility requirements to align with the Small Business program demand structure implemented by the other Utilities, so that the program targets customers with a monthly demand below 60 kW. The Commission directed an EmPOWER Work Group to comment on whether the definition of "small business" for purposes of this program should include additional criteria beyond the appropriate demand level. The Commission and other interested stakeholders will review PE's subsequent Small Business program performance to determine what effect, if any, the modified eligibility criteria have on program success.

[33] PE operates three additional programs, not funded through the EmPOWER Maryland surcharge, that contribute energy and demand savings toward the 2015 EmPOWER goal, including: streetlights, high-efficiency transformers, and a conservation voltage reduction program.

Evaluation work of PE's Conservation Voltage Reduction ("CVR") Program was completed in the second half of 2014, which resulted in 55,995 MWh of verified energy savings. Although the energy savings obtained by this program is impressive, there are no additional energy savings forecasted in the 2015-2017 program cycle. In fact, these energy savings could go down in the future depending on the conditions of PE's transmission and distribution system.

As noted in Table 7, PE's EmPOWER portfolio reported an incremental 142,763 MWh of energy savings in 2014 – an achievement of 118% of its interim 2014 electric consumption reduction target. PE's EmPOWER portfolio also reported an incremental 19.589 MW of demand reductions, thereby achieving 109% of its 2014 peak demand reduction target, as noted in Table 8.

Table 7. PE Energy Savings Interim Reported[34] Achievements

	2014 Electric Consumption Reduction (MWh)	**Percentage of 2014 Target***	**Program-to-Date Electric Consumption Reduction (MWh)**	**Percentage of 2015 Goal**
EmPOWER Maryland Targets**	121,313	118%	415,228	119%
PE Portfolio of Programs	142,763		495,264	

* Percentage of energy savings forecasted for the year compared to actual savings.
**EmPOWER Maryland reduction targets are based upon the individual EmPOWER Maryland filings of each utility.

Table 8. PE Peak Demand Reduction Interim Reported Achievements[35]

	2014 Peak Demand Reduction (MW)	**Percentage of 2014 Target***	**Program-to-Date Peak Demand Reduction (MW)**	**Percentage of 2015 Goal**
EmPOWER Maryland Targets**	17.926	109%	21.000	359%
PE Portfolio of Programs	19.589		75.416	

* Percentage of demand savings forecasted for the year compared to actual savings.
**EmPOWER Maryland reduction targets are based upon the individual EmPOWER Maryland filings of each utility.

[34] "Reported" savings constitute unverified energy savings and demand reductions based on the Utilities' quarterly programmatic reports. An independent, third-party verification of reported savings is conducted annually.
[35] PE is the only utility that does not operate a separate demand response program. Achievement toward PE's demand reduction goal is derived from the Company's EE&C portfolio, Fast Track programs, and non-EmPOWER funded additional programs.

DPL

DPL's current EmPOWER Maryland portfolio is designed to save approximately 332,000 MWh and nearly 109 MW by the end of 2015.[36] DPL already exceeded its 2015 energy savings and demand reduction goal.

In 2014, the most successful program in terms of energy savings was the Small Business program, reporting 47,990 MWh, which was greater than the total Residential portfolio savings of 41,976 MWh. As part of this program, lighting accounted for 88% of all measures installed and 92% of all the energy savings reported in 2014. LED lighting represented 85% of the installed lighting measures. Due to the program's high demand and sizeable energy savings potential, the Company requested and the Commission approved a customer incentive budget increase of $10.3 million to support program implementation through the end of 2014. Similar to Pepco, DPL will modify its Small Business program in the 2015 – 2017 program cycle to more closely align with Small Business programs operated by the other Utilities, including: modifying the eligibility requirement from 100 kW to 60 kW per month (based on the customer's maximum demand over the previous 12 months); and capping the program incentives at 80% of the total project cost.

DPL EmPOWER Programs

Residential Programs

Appliance Rebate
Appliance Recycling
Behavior-Based
Home Performance with Energy Star
HVAC
Lighting
New Homes
Quick Home Energy Check-up

Commercial Programs

Combined Heat and Power
Custom
Master Meter and Multi-Family
New Construction
Prescriptive
Retro-commissioning
Small Business
Master-Metered Multi-Family*

*New Program for 2015-2017 Cycle

On the Residential side, Lighting and the Behavior-based programs accounted for 81.3% of the energy savings reported in 2014 (Lighting, 63.5%; and Behavior-based, 17.8%). The Behavior-based program experienced rapid growth as DPL increased mailings from 25,000 in 2013 to over 310,000 in 2014. In the 2015 – 2017 program cycle, energy savings attributable to the Behavior-based program are projected to increase from 7,458 MWh, at the end of 2014, to 18,662 MWh. As Behavior-based programs begin to account for a greater percentage of the portfolio's total energy savings, customer engagement will be tracked to determine if the projected ramp-up in energy savings is viable.

As noted in Table 9, DPL's EmPOWER portfolio[37] reported an incremental 118,926 MWh of energy savings in 2014 – an achievement of 69% of its interim 2014 electric consumption reduction target. DPL's EmPOWER portfolio also reported an incremental 21.688 MW of demand reductions, thereby achieving only 38% of its interim 2014 peak demand reduction target, as noted in Table 10. In the summer of 2014, DPL conducted a 5,000 customer

[36] DPL operates three additional programs, not funded through the EmPOWER Maryland surcharge, that contribute energy and demand savings toward the 2015 EmPOWER goal, including: streetlights, high-efficiency transformers, and a dynamic pricing program (which completed its first phase-in stage during the summer of 2014).

[37] The DPL EmPOWER portfolio includes savings contributions from the lighting rebate Fast Track program, which was in place beginning January 1, 2008 (prior to the enactment of the EmPOWER Maryland Act).

pilot for its smart grid-enabled dynamic pricing program and will begin to report demand savings attributable to this program in 2015.

Table 9. DPL Energy Savings Interim Reported[38] Achievements

	2014 Electric Consumption Reduction (MWh)	Percentage of 2014 Target*	Program-to-Date Electric Consumption Reduction (MWh)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	173,568	69%	143,453	189%
DPL Portfolio of Programs	118,926		271,180	

* Percentage of energy savings forecasted for the year compared to actual savings.
**EmPOWER Maryland reduction targets are based upon the individual EmPOWER Maryland filings of each utility.

Table 10. DPL Peak Demand Reduction Interim Reported Achievements[39]

	2014 Peak Demand Reduction (MW)	Percentage of 2014 Target*	Program-to-Date Peak Demand Reduction (MW)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	56.595	38%	18.000	428%
DPL Portfolio of Programs	21.688		76.985	

* Percentage of demand savings forecasted for the year compared to actual savings.
**EmPOWER Maryland reduction targets are based upon the individual EmPOWER Maryland filings of each utility.

[38] "Reported" savings constitute unverified energy savings and demand reductions based on the Utilities' quarterly programmatic reports. An independent, third-party verification of reported savings is conducted annually.
[39] The demand reduction interim targets and reported achievements include peak demand reductions generated by both EE&C and DR programs, as both components contribute toward achieving the Utilities' overall 2015 peak reduction goals.

SMECO

SMECO's current EmPOWER Maryland portfolio is designed to save approximately 292,000 MWh and nearly 97 MW by the end of 2015.[40] According to the Cooperative's forecasts, SMECO will likely fall short of its 2015 demand reduction goal, although the Cooperative has already exceeded its 2015 energy savings goal.

SMECO EmPOWER Programs

Residential Programs

Appliance Rebate

Appliance Recycling

Behavior-Based

Home Performance with Energy Star

HVAC

Lighting

New Homes

Quick Home Energy Check-up

Assisted Home Performance with Energy Star*

Commercial Programs

Custom

Prescriptive

Small Business

Master-Metered Multi-Family*

Upstream Lighting*

*New Program for 2015-2017 Cycle

SMECO's Residential portfolio of programs achieved in aggregate 99% the 2014 forecasted energy savings.[41] Except for the Lighting program, the individual Residential programs fell short of projected energy savings, although most were within 3% of the forecasted savings. One Residential program, the Quick Home Energy Check-up ("QHEC"), did not achieve either its 2014 forecast for participation or energy savings, experiencing a decrease of over 1,000 participants and 400 MWh of energy savings from 2013 to 2014. This downward trend is primarily attributable to a shifting market dynamic in the SMECO territory, as the program participant focus has shifted from multi-family properties to single-family homes. A greater number of QHEC participants were realized in 2012 and 2013 due to high completion rates of multi-family properties. In 2014, the focus shifted to single-family QHEC projects, which achieve on average more energy savings per unit.

The Cooperative's C&I portfolio exceeded in aggregate the 2014 forecast for energy savings by 2%. In 2014, the Prescriptive and Small Business programs accounted for the majority of reported energy savings, with both programs surpassing forecasted energy savings by 6% and 63%, respectively. The Custom program, in contrast, achieved only 14% of the forecasted energy savings due to the State's adoption of the more stringent ASHRAE 2010 / IECC 2012 code requirements, which became effective this past year.

As noted in Table 11, SMECO's EmPOWER portfolio reported an incremental 54,677 MWh of energy savings in 2014 – an achievement of 101% of its interim 2014 electric consumption reduction target. SMECO's EmPOWER portfolio also reported an incremental

[40] SMECO currently operates one additional program, not funded through the EmPOWER Maryland surcharge, which contributes energy and demand savings toward the 2015 EmPOWER goal – a conservation voltage reduction program.

[41] In 2013, SMECO exceeded its residential energy savings forecast by 2%.

12.790 MW of demand reductions, thereby achieving 94% of its 2014 peak demand reduction target, as noted in Table 12.

Table 11. SMECO Energy Savings Interim Reported[42] Achievements

	2014 Electric Consumption Reduction (MWh)	Percentage of 2014 Target*	Program-to-Date Electric Consumption Reduction (MWh)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	53,880	101%	83,870	263%
SMECO Portfolio of Programs	54,677		220,975	

* Percentage of energy savings forecasted for the year compared to actual savings.
**EmPOWER Maryland reduction targets are based upon the individual EmPOWER Maryland filings of each utility.

Table 12. SMECO Peak Demand Reduction Interim Reported Achievements[43]

	2014 Peak Demand Reduction (MW)	Percentage of 2014 Target*	Program-to-Date Peak Demand Reduction (MW)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	13.560	94%	139.000	62%
SMECO Portfolio of Programs	12.790		85.740	

* Percentage of demand savings forecasted for the year compared to actual savings.
**EmPOWER Maryland reduction targets are based upon the individual EmPOWER Maryland filings of each utility.

[42] "Reported" savings constitute unverified energy savings and demand reductions based on the Utilities' quarterly programmatic reports. An independent, third-party verification of reported savings is conducted annually.
[43] The demand reduction interim targets and reported achievements include peak demand reductions generated by both EE&C and DR programs, as both components contribute toward achieving the Utilities' overall 2015 peak reduction goals.

Limited-Income Programs

On December 22, 2011, in Order No. 84569, the Commission designated DHCD as the sole implementer of Limited-Income programs for the EmPOWER Maryland Utilities. In April 2012, DHCD accepted control of the residential limited-income programs of BGE, PE, and SMECO. In July 2012, the transition was completed with DHCD accepting control of the Pepco and DPL limited-income programs. In 2014, DHCD weatherized approximately 5,297 limited-income homes at a total cost of $34.9 million. Total energy savings per job averaged 2,995 MWh.

In Order No. 86785, issued on December 23, 2014, the Commission authorized DHCD to continue its implementation of the Limited-Income programs in Maryland during calendar year 2015, subject to the following structural enhancements:

- In general, the spending guideline per eligible limited-income household is set at $7,500 inclusive of all measures, although DHCD may spend up to $12,000 per limited-income household upon submitting documentation of its best efforts to leverage outside funds. A report detailing specific efforts to leverage outside funds and resources for all projects is to be submitted in conjunction with the semi-annual report;
- The health and safety spending limit is increased to $1,000 per eligible limited-income household, so that audits may proceed following the correction of factors such as bathroom ventilation, smoke detectors, and electrical issues;
- In conjunction with the Limited-Income Work Group, DHCD is directed to develop a cost-effective prescribed list of measures for weatherizing a home using EmPOWER funds, including an accompanying price list defining acceptable ranges of measure prices by service territory. The Work Group is directed to file a report detailing the recommended prescribed measure and price list by April 15, 2015; and
- DHCD is directed to require an up-front investment by a landlord of at least 50% of the total equipment cost for large, costly measures.

The Commission also concurred with the recommendation by the Limited-Income Work Group that more costly measures offered to eligible households should be subject to energy usage, equipment, and ownership guidelines. The Commission therefore directed the Limited-Income Work Group to file a report by April 15, 2015 outlining certain age and efficiency specifications that must be met prior to replacement of larger, more costly equipment that is otherwise in good operating condition.

Demand Response

The EmPOWER Maryland Act requires the Utilities to implement cost-effective demand response programs designed to achieve a reduction in per capita peak energy demand (measured in kilowatts ("kW")) of 5% by 2011, 10% by 2013, and 15% by 2015. Customers who have actively chosen to participate in these programs have a switch or thermostat at their properties to briefly curtail usage of central air conditioning or an electric heat pump; curtailment occurs only in instances of system reliability or high electricity prices during critical peak hours. The

Commission approved four residential Demand Response programs in late 2007 and early 2008,[44] all of which were operational by the end of 2009.[45]

Each DR program includes the following common components: (1) customer participation in DR programs is voluntary; (2) upon receiving a customer request, the Utility installs either a programmable thermostat or a direct load control switch for a central air conditioning system or for an electric heat pump on a customer's premise; (3) the Utilities provide a one-time installation incentive and annual bill credits to the participants during the specified summer peak months; and (4) with the exception of the SMECO DR program, customers can select one of three cycling choices (50%, 75%, and 100%).[46] During the 2014 implementation of the DR program, SMECO used an initial 3 degree offset followed by 30% cycling for the thermostats and a 50% cycling option followed by 30% cycling for the switches during specified time periods.[47] Utilities will invoke the cycling process when PJM calls for an emergency event or if the Utilities individually determine that an event is necessary during the summer peak season. Table 13 summarizes the incentives offered by the Utilities to the program participants.

Table 13. Utilities' Incentive Levels for DLC Program Participants

Utility	50% Cycling		75% Cycling		100% Cycling		Bill Credit Month
	Installation Incentive	Annual Bill Credit	Installation Incentive	Annual Bill Credit	Installation Incentive	Annual Bill Credit	
BGE	$50	$50	$75	$75	$100	$100	Jun.– Sept.
Pepco	$40	$40	$60	$60	$80	$80	Jun.– Oct.
DPL	$40	$40	$60	$60	$80	$80	Jun.– Oct.
	Installation Incentive			Annual Bill Credit			Bill Credit Month
	Thermostat	Digital Switch		Thermostat	Digital Switch		
SMECO	***	None		$50	$50		Jun.– Oct.

*** A participant in the SMECO CoolSentry program can keep the installed thermostat at no additional cost following 12 months of program participation; otherwise, the thermostat will be removed if the participant terminates participation less than 12 months after installation.

Table 14 summarizes the installation progress of these devices for each of the Utilities' direct load control ("DLC") programs. With the exception of Pepco, the 2014 device installations accounted for only 2% to 4% of the program-to-date totals. As evidenced by this comparison of installations completed in 2014 versus program-to-date installations, progress has slowed in all but one service territory. The reduced number of device installations is likely attributable to approaching market saturation, which raises a concern about whether the Utilities can achieve their demand reduction goals – especially relying solely on the traditional DLC programs. While the 2014 installation progress by Pepco seems to rebut this assertion at first glance (given that Pepco's 2014 device installations accounted for almost 20% of the program-to-date totals), the

[44] Commission Letter Order dated November 30, 2007.

[45] The Commission did not approve a DR program for PE similar to those implemented for BGE, Pepco, DPL, and SMECO because PE's proposed program was not cost effective due to lower zonal capacity prices.

[46] The three cycling choices represent the air conditioner compressor working cycle reduced by 50%, 75%, and 100% under PJM- or utility-invoked emergency events during summer peak season.

[47] Beginning with the 2015 – 2017 program cycle, SMECO received Commission approval to change the design of its program from a three degree temperature offset to a 50% and 75% cycling level with corresponding bill credits of $50 and $75 during the summer months to more closely align with the other Utilities' DR programs.

increased installation rate during 2014 is primarily attributable to the Company's slow roll-out of devices in the earlier years of the program.

Table 14. Utilities' Residential Direct Load Program Device Installations

Utility	2014	Program-to-Date	Percent of Eligible Customers Participating*
BGE	6,785	371,957	39%
Pepco	35,585	180,154	65%
DPL	605	34,822	36%
SMECO	1,561	41,626	52%
Total	**46,550**	**628,559**	**48%**

*Eligible Customers have a central air conditioner or heat pump

For the 2015 – 2017 program cycle, in an effort to increase program participation, the Commission granted SMECO's request to alter its DLC program design by eliminating the three degree temperature offset and offering instead a 50% and 75% cycling level option with corresponding $50 and $75 participant summer bill credits. Additionally, the Commission allowed all of the Utilities to offer two-way or AMI-compatible thermostats to determine whether these technologies facilitate greater participation and demand savings.

Table 15 summarizes the demand reductions achieved by the Utilities' DLC programs for 2014 and program-to-date. The total peak demand reduction reported in 2014 was 30.211 MW, or approximately 35% of the forecast, reinforcing the concern of market saturation. Program-to-date, the four Utilities have achieved 717.258 MW of demand reduction through the DLC programs, accounting for 34% of the 2015 peak demand reduction goal and 41% of demand reductions reported to-date.[48]

Table 15. DLC Program Coincident Peak Demand Reduction (MW)

Utility	2014 Peak Demand Target	2014 Reported	Percent of 2014 Target	Program-to-Date Reported
BGE	13.700	-5.185	-38%	448.207
PEPCO	41.957	33.229	79%	183.845
DPL	28.916	0.872	3%	33.926
SMECO	2.201	1.295	59%	51.280
Total	**86.774**	**30.211**	**35%**	**717.258**

Additional demand reductions are expected to stem from smart grid-enabled dynamic pricing programs, furthering the Utilities' progress toward the 2015 peak demand reduction goals. Table 16 summarizes the reported demand reductions from the dynamic pricing programs for 2013 and 2014, as well as forecasted dynamic pricing program demand reductions for the 2015 – 2017 program cycle.[49] While Pepco and BGE both reported demand reductions in 2014 from the dynamic pricing programs, DPL administered a 5,000 customer pilot and opted not to

[48] Demand savings also accrue from the Utilities' EE&C programs, non-EmPOWER funded programs such as CVR, and other smart grid-enabled programs such as dynamic pricing.

[49] The 2015 – 2017 forecasted dynamic pricing demand reductions are compiled using data from the Utilities' revised ES tables, filed on February 13, 2015.

report demand savings from the pilot phase. However, all three Utilities project demand savings resulting from the smart grid-enabled dynamic pricing programs in the subsequent program cycle. Demand reductions from dynamic pricing represent a snapshot for a particular time period and are dependent upon customer engagement and participation; therefore, demand reductions attributable to dynamic pricing programs may change year-to-year.

Table 16. Dynamic Pricing Program Demand Reduction (MW)

Utility	Reported		Forecast		
	2013	2014	2015	2016	2017
BGE	0.000	209.000	241.000	272.000	284.000
Pepco	309.000	125.000	185.494	173.911	175.041
DPL	0.000	0.000	11.213	51.107	51.215
Total	**309.000**	**334.000**	**437.707**	**497.018**	**510.256**

PJM Capacity Market: The Reliability Pricing Model

In 2014, the Utilities' DLC programs resulted in a combined 536 MW bid into the PJM Reliability Pricing Model ("RPM") Base Residual Auction ("BRA") for Delivery Year ("DY") 2017-2018, an 11% decrease from the 2013 PJM bid of 554 MW for DY 2016-2017. The Utilities collectively lowered their bids into the PJM capacity market as the DLC programs approach market saturation levels. To-date, these programs have contributed 5,537 MW of the total capacity bid into the PJM capacity market, which has resulted in a total of $303.4 million in capacity payments that PJM has/will make to the Utilities, thereby offsetting the total cost of the DLC programs, which totaled over $494 million through the end of 2014. Table 17 summarizes the capacity bid into the PJM capacity market from the DLC programs by delivery year, as well as the resulting payments that the Utilities receive from PJM, which are then used to offset the DLC program cost for ratepayers.

Table 17. Demand Response Program BRA Results (MW)

	DY 2009-2010	DY 2010-2011	DY 2011-2012	DY 2012-2013	DY 2013-2014	DY 2014-2015	DY 2015-2016	DY 2016-2017	DY 2017-2018	**Total**
Cleared MW	217	415	662	953	803	772	625	554	536	**5,537**
PJM Capacity Payment (Million $)	$18.8	$26.4	$26.6	$46.5	$67.7	$33.9	$36.0	$24.1	$23.5	**$303.4**

The Utilities also bid capacity reductions from their EE&C programs and AMI-enabled dynamic pricing programs. Similar to the DLC programs, the Utilities earn capacity payments from PJM for these commitments; the payments are used to offset EE&C program costs and fund the rebates earned by customers in the dynamic pricing program. Tables 18 and 19 summarize the capacity bid into the PJM capacity market from the EE&C and dynamic pricing programs by delivery year and the payments the Utilities receive from PJM.

Table 18. EE&C Program BRA Results (MW)

	DY 2012-2013	DY 2013-2014	DY 2014-2015	DY 2015-2016	DY 2016-2017	DY 2017-2018	**Total**
Cleared MW	168	106.6	178.8	175	226	243	**453**
PJM Capacity Payment (Million $)	$8.2	$8.7	$8.3	$10.2	$9.5	$10.8	**$55.7**

Table 19. Dynamic Pricing Program BRA Results (MW)

	DY 2014-2015	DY 2015-2016	DY 2016-2017	DY 2017-2018	**Total**
Cleared MW	267	426	461	387	**1,542**
PJM Capacity Payment (Million $)	$12.2	$23.3	$20.0	$17.0	**$72.6**

Table 20 illustrates the amount of capacity cleared in the May 2013 and May 2014 BRA by the EmPOWER Utilities for the delivery years of 2016/2017 and 2017/2018, respectively. The table also shows the amount of capacity revenue that the Utilities can expect to receive from PJM in the two delivery years, which will be used to offset the costs of the DR, EE&C, and dynamic pricing ("DP") programs borne by ratepayers. The amount of capacity cleared in the 2017/2018 DY auction is 74 MW less than the amount of capacity cleared in 2016/2017 DY, primarily due to the reduced DP program capacity bids. It can be expected that the DP program bids will fluctuate in the early years of the program as the Utilities gain a more thorough understanding of customer engagement and the persistence of customer engagement over time.

PJM noted that the 2017/2018 capacity prices were higher than the previous delivery year due to the implementation of maximum limits for the Limited Demand Response and Extended Summer Demand Response products.[50] The imposition of these limits led to an 11.6% drop in the quantity of demand resources cleared in the 2017/2018 BRA as compared to the 2016/2017 BRA. Of note is that the higher clearing prices occurred despite a 1.3% decrease in the amount of cleared capacity in the 2017/2018 BRA as compared to the 2016/2017 BRA.[51] This decrease followed a 2.8% increase in cleared capacity from the 2015/2016 BRA to the 2016/2017 BRA.[52] Another factor in increasing prices was the implementation of capacity import limits, which tended to reduce the amount of total imports offered and cleared in the 2017/2018 auction.[53]

[50] *2017/2018 RPM Base Residual Auction Results*, PJM (February 20, 2015),http://www.pjm.com/~/media/markets-ops/rpm/rpm-auction-info/2017-2018-base-residual-auction-report.ashx.
[51] *Id.*
[52] *Id.*
[53] *Id.*

Table 20. Maryland Utilities' PJM BRA Results and Expected Revenue for Delivery Years 2016/2017 and 2017/2018

DY 2016-2017					DY 2017-2018				
Cleared Bids (MW)				Expected Revenue	Cleared Bids (MW)				Expected Revenue
DR	DP	EE&C	Total	($Million)	DR	DP	EE&C	Total	($Million)
554	461	226	1,240	$53.57	536	387	243	1,166	$51.21

The Commission continues to closely monitor the repercussions of the May 23, 2014 U.S. Court of Appeals for the D.C. Circuit vote to invalidate Federal Energy Regulatory Commission ("FERC") Order 745, which set the compensation for demand response at the locational marginal price ("LMP") for the place and time demand response is offered.[54] If ultimately upheld, the D.C. court's decision could negatively affect certain EmPOWER Maryland programs, given that the majority of revenues used to fund the Utilities' DR programs flow from the PJM capacity market, where the Maryland Utilities have earned approximately $432 million in capacity payments to-date. Because of the ongoing litigation, it is unlikely that there will be any meaningful short-term effects on the EmPOWER programs, but the long-term design may be adjusted in response to any final court determination.

EmPower Maryland Funding Levels

EE&C Program Funding

On December 22, 2011, in Order No. 84569, the Commission approved the 2012 – 2014 program cycle budgets based on the EmPOWER Maryland Utilities' proposals.[55] Table 21 breaks down the 2014 Commission-approved budgets for each of the Utilities, while Table 22 illustrates the actual 2014 expenditures by the Utilities with respect to their EmPOWER Maryland EE&C programs.

Table 21. Forecasted 2014 EE&C Budgets

	Residential	Commercial	DHCD Limited Income Program	Total
BGE	$49,102,499	$60,838,381	$13,934,240	$123,875,120
Pepco	$42,869,253	$97,113,662	$3,971,250	$143,954,165
PE	$17,175,644	$7,479,315	$3,877,854	$28,532,813
DPL	$11,640,593	$36,440,261	$3,971,250	$52,052,104
SMECO	$10,620,460	$3,587,388	$656,532	$14,864,380
Total	$131,408,448	$205,459,008	$26,411,126	$363,278,581

[54] On Januray15, 2015, the Solicitor General, on behalf of FERC, petitioned for a writ of certiorari to the United State Supreme Court, to review the judgment of the United States Court of Appeals for the District of Columbia Circuit. On February 17, 2015, the Commission, along with the California PUC and Pennsylvania PUC filed a Joint Brief in Support of Cert.

[55] During the course of the 2012 – 2014 program cycle, the Utilities requested and received adjustments to the budgets of certain programs, resulting in 2014 budgets that differ in some respects from the proposals filed by the Utilities in September 2011.

Table 22. Reported 2014 EE&C Spending

	Residential	Commercial	DHCD Limited Income Program	Total
BGE	$45,966,065	$43,598,752	$19,374,365	$108,939,182
Pepco	$30,879,001	$87,000,200	$4,297,211	$122,176,412
PE	$14,101,717	$10,874,835	$3,681,097	$28,657,649
DPL	$7,243,340	$34,046,276	$6,079,854	$47,369,470
SMECO	$7,760,327	$3,065,789	$1,544,064	$12,370,180
Total	$105,950,450	$178,585,851	$34,976,592	$319,512,893

Table 23 details the EmPOWER Maryland EE&C program surcharges and revenue requirements for each of the Utilities. The EmPOWER Maryland surcharges are a volumetric-based charge, subject to the individual ratepayer's energy usage. The revenue requirements do correspond to the filed budgets because program costs are collected over a five-year period as directed by the Commission in Order No. 81637.[56]

Table 23. 2014 EE&C Monthly Surcharges (per kWh) and Revenue Requirements

	Residential	Large C&I	Small C&I	Revenue Requirement
BGE	$0.0027	$0.0019	$0.0039	$74,339,819
Pepco	$0.0032	$0.0019	$0.0019	$35,160,153
PE	$0.0044	$0.0008	$0.0012	$18,005,171
DPL	$0.0025	$0.0028	$0.0028	$10,738,568
SMECO	$0.0038	$0.0018	$0.0018	$10,792,076

Demand Response Funding

The December 22, 2011 Commission Order similarly approved three-year budgets for the demand response programs operated by BGE, DPL, Pepco, and SMECO. Table 24 details the EmPOWER Maryland demand response surcharges and revenue requirements of each of the Utilities with an approved DR program.[57]

[56] *In the Matter of the Commission's Investigation of Advanced Metering Technical Standards, Demand Side Management (DSM) Cost Effectiveness Tests, DSM Competitive Neutrality, and Recovery of Costs Advanced Meters and DSM Programs*, Case No. 9111.

[57] PE did not operate a separate DR program during 2014 and therefore did not file for a surcharge recovery of DR program costs.

Table 24. 2014 Demand Response Monthly Surcharges (per kWh) and Revenue Requirements

	Residential Surcharge	C&I Surcharge	Revenue Requirement
BGE	$0.0011	N/A	$13,957,948
Pepco	$0.0000	$0.0003	$2,679,823
DPL	$0.0005	$0.0000	$1,108,620
SMECO	$0.0024	$0.0024	$8,532,683

Table 25 details the respective forecasted and reported budgets for each of the EmPOWER Utilities operating an approved DR program during 2014. With the exception of Pepco, the other Utilities' programs were under budget for the 2014 program year due to the programs falling short of installation forecasts, which resulted in lower than forecasted spending on equipment, installation and incentive payments.[58]

Table 25. 2014 Demand Response Forecasted and Reported Budgets

	Forecasted Budget	Reported Costs	Variance
BGE	$41,391,180	$36,411,630	($4,979,549)
Pepco	$21,470,787	$24,183,807	$2,713,020
DPL	$7,168,374	$5,041,109	($2,127,266)
SMECO	$10,471,806	$7,891,364	($2,580,442)
Total	$89,985,366	$72,062,638	($17,922,728)

Evaluation, Measurement, and Verification

Determining and validating electricity savings and related impacts is a critical component of EE&C and DR programs. The process of evaluation, measurement, and verification ("EM&V") of resulting program savings is particularly important in determining: the effectiveness of program delivery; the factors driving or impeding customer participation in programs; characteristics of participants and non-participant customers; determinants of equipment decisions; and customer satisfaction with program delivery. Moreover, the design and depth of program data collection, monitoring, and analyses can impact the accuracy and prudence of compliance results. Given the scale of the EmPOWER Maryland initiative and the potential bill impacts, the Commission is sensitive to the issue of program credibility and transparency. This process also evaluates free-ridership, spillover, cost-effectiveness, deemed savings calculations, etc., pertinent to a thorough and ongoing review of viable and cost-effective energy efficiency and demand response programs.

Based on EM&V best practices, the Commission adopted an independent, third-party evaluator model to review the EmPOWER portfolio results.[59] In this model, the Utilities direct primary evaluation and verification activities through an EM&V contractor; subsequently, the

[58] While Pepco exceeded its 2014 program year DR program budget, its DR program costs remained within the total approved 2012-2014 program budget.
[59] Order No. 82869 (issued Aug. 31, 2009), Case Nos. 9153-9157.

Commission's third-party, independent evaluator provides independent analysis and due diligence of the EM&V process. Because this thorough evaluation process requires up to six months to complete following the receipt of program data from the prior calendar year, this report illuminates the results of the Utilities' 2013 program year reported savings.

Overall Findings of the 2013 EmPOWER EE&C Program

Energy and Peak Demand Savings

In 2013, Navigant's evaluation of the first year savings[60] was 810,383 MWh and 125.547 MW, which was 93% and 101% of the Utilities' reported energy and demand savings. Navigant noted that, overall, the gross realized savings ratios ("GRSRs") of the Utilities' programs are converging on 1.0, with fewer programs realizing outlier GSSRs. This implies that the Utilities and their implementation contractors are continuing to improve their reported energy savings estimates by improving their data entry and tracking processes and also by incorporating more accurate data elements generated by the broader evaluation process (e.g., EM&V results, updated Technical Resource Manual parameters).[61]

For the 2013 program year, Navigant estimated an effective Net-to-Gross ("NTG") ratio of 0.69 for annual energy savings and 0.68 for peak demand savings. The NTG ratio is used to derive savings attributable to the EmPOWER programs by calculating free-ridership levels.[62] Following application of the calculated NTG ratios, the net savings for program year 2013 were 562,058 MWh and 85.520 MW.

As the EmPOWER Maryland Independent Evaluator, Itron, Inc. ("Itron") supports the Commission's oversight of the statewide evaluation of the EmPOWER EE&C programs conducted by Navigant. Itron's verification analysis confirmed 99.8% of the evaluated energy and demand savings estimates. Except for the Residential HVAC and New Construction programs, verified savings equaled the evaluated savings for all of the EmPOWER programs in program year 2013. This important result should increase ratepayer and other stakeholders' confidence that the evaluated savings from the EmPOWER Maryland programs are real and credible.

Given that the key energy assumption values and net-to-gross ratios have been updated and other anomalies in the program tracking databases have been rectified to improve the quality of reporting, it is expected that the Utilities' reported savings estimates for 2014 should continue to be very similar to the evaluation results. Changes to evaluation parameters and codes and standards will have the effect of raising the baseline level of energy savings, therefore reducing the incremental energy savings achieved by installing efficient equipment. The EM&V contractors will monitor and reflect these changes in future evaluation cycles.

Cost Effectiveness

Table 26 presents the 2013 total resource cost ("TRC") test cost-effectiveness results by sector for each of the Utilities.[63] The sector-level benefit-to-cost ratios reflect the present value of the benefits compared to the present value of the costs, aggregated from each program in the sector-level sub-portfolio. As noted, TRC ratios greater than 1.0 indicate that the financial

[60] "First year savings" is the amount of energy a measure will save in the year the measure was installed.
[61] EmPOWER Maryland Final Impact Evaluation Report Calendar Year 2013, July 11, 2014, page 4.
[62] A "free rider" is a customer who would have installed an energy efficiency measure absent the utility-provided EmPOWER rebate.
[63] The 2014 program year cost-effectiveness results are expected in April 2015.

benefits that accrue over the life of the measures exceed the financial costs of the program, specifically the costs associated with: utility program administration; the provision of incentives to free riders; and customer outlays for the efficiency measures. Statewide, both the residential and C&I portfolios were cost effective in 2013, with overall TRC scores of 1.76 and 1.85, respectively.

Table 26. 2013 Portfolio TRC Results

	Residential	Commercial	Portfolio
BGE	1.79	1.59	1.69
Pepco	2.09	2.36	2.24
PE	0.71	1.08	0.81
DPL	2.52	1.78	2.04
SMECO	1.71	1.65	1.7
Statewide	1.76	1.85	1.81

At the statewide level, the 2013 EmPOWER portfolio is expected to generate approximately $1.81 in utility and participant benefits for every dollar of utility and participant cost. For a total investment of $256 million,[64] the State's Utilities, participants, and ratepayers will realize approximately $463 million[65] in financial benefits via electricity, fuel, and water savings generated over the lifetime of the measures installed through the EmPOWER program. These results correspond to a net benefit of approximately $207 million.

When assessing whether to approve the Utilities' plans, the Commission evaluates cost effectiveness at the sub-portfolio level, i.e., the C&I and Residential sub-portfolios should both generate TRC ratios greater than 1.0. Thus, individual programs do not necessarily need to be cost effective as long as other programs are sufficiently cost-effective to generate sector-level TRC ratios that are greater than 1.0. The Commission may approve individual programs that are not individually cost effective to ensure a broader array of energy-saving opportunities amongst rate classes, income levels, etc. or because the program may promote innovative technologies and market-transformative practices leading to broader energy savings.

All EmPOWER Utilities, with the exception of PE, have developed cost-effective portfolios that pass the TRC test – most by a comfortable margin. In 2013, PE's total portfolio did not pass the TRC test on a retrospective basis because of its Residential sub-portfolio results. These results are largely attributable to the fact that PE does not include any price mitigation or transmission and distribution ("T&D") benefits in its avoided cost estimates. The decision by PE to assume a zero estimate for price mitigation or T&D benefits for its EmPOWER programs is a primary driver of its sector-level TRC results.

[64] The $256 million total investment is the present value of both utility and participant costs.
[65] The $463 million in financial benefits is the present value of both utility and participant benefits.

Advanced Metering Infrastructure Programs

Advanced metering infrastructure ("AMI") or "smart grid" technology refers to an integrated system of smart meters, communication networks, and data management systems that enable two-way communication between utilities and the meters located on customer premises. Because smart grid technology facilitates real-time monitoring of energy usage, which in turn enables new and innovative programs such as dynamic pricing, AMI is included in this report as it is generally considered to be an initiative that can reduce peak demand and energy consumption beyond those reductions achieved through "traditional" EE&C and DR programs.

Maryland Utilities Smart Grid Activity

The Commission authorized the deployment of smart meters for BGE (Case No. 9208) in 2010; Pepco (Case No. 9207) in 2010; DPL (Case No. 9207) in 2012; and SMECO (Case No. 9294) in 2013. As of December 31, 2014, approximately 2.3 million electric and gas meters have been installed across the State. BGE has installed over 1.5 million electric meters and gas modules, or approximately 73% of the total planned installations, and expects to complete its deployment in the first half of 2015. Pepco has installed over 560,800 meters, or approximately 99% of the total planned installations. DPL has installed over 211,000 meters, or approximately 96% of the total planned installations. While the Cooperative previously completed installation of a limited number of smart meters as part of a pilot, SMECO will begin its full-scale deployment in the second half of 2015.

While authorizing full-scale deployment of smart meters in four service territories, the Commission concluded that the public interest required an option for customers to decline the installation of a smart meter, so long as the ratepayers that exercise the option are required to bear appropriate costs.[66] On February 26, 2014, the Commission issued Order No. 86200, in which it extend the opt-out choice to residential and small commercial customers and allocated to these customers the appropriate costs associated with the opt-out decision. Consistent with the traditional ratemaking principles of cost causation, the Commission established a two-part fee structure designed to allocate the fixed and ongoing costs directly attributable to the opt-out customer.

Utility	Up-Front Fee (Payable in 3 monthly installments)	Ongoing, Monthly Fee
BGE	$ 75.00	$ 11.00
Pepco	$ 75.00	$ 14.00
DPL	$ 75.00	$ 17.00
SMECO	$ 75.00	$ 17.00

While many parties were supportive of the Commission's decision to allow an opt out, several stakeholders such as MEA noted that allowing even one customer to opt out causes an erosion of the benefits derived from smart grid technology. In particular, MEA expressed concern regarding the inability of opt-out customers to take advantage of opportunities such as

[66] Order No. 85294 (Jan. 7, 2013) at 2.

the Utilities' dynamic pricing programs.[67] For this reason, future iterations of this report will monitor the opt-out numbers in each service territory as the data will impact the magnitude of savings achievable by the dynamic pricing programs and any future smart grid-enabled program.

2014 per Capita Energy Consumption and Peak Demand

Tables 27 and 28 present the per capita electricity consumption and the per capita peak demand for all of the Maryland utilities in 2007, which serves as the baseline upon which the EmPOWER Maryland per capita reduction goals are based. Additionally, the tables include the EmPOWER Maryland goals of a 10% per capita reduction in electricity use and a 15% per capita reduction of peak demand by the end of 2015. The final column in each table calculates the amount of electricity use reduction and peak demand reduction necessary to achieve the applicable 2015 per capita reduction targets. These numbers are based on electricity use and demand forecasts from the 2011 PJM load forecast and population projections based on the 2010 census population data.

[67] ML#148814: *Comments Regarding the Companies' Proposals for an Opt-out Option for Advanced Meters* (July 31, 2013) at 10.

Table 27. Ten Percent Reduction per Capita Energy Consumption

EmPower Maryland - 10 Percent Reduction in Maryland Energy Sales 2015										
2007 Utility Company Data Request Information										
Maryland Utility	**Energy Use MWh (1)**	**2007 Loss Factors (2)**	**Energy Sales Gross-Up by Loss Factor**	**2007 Estimated Population (3)**	**2015 Estimated Population (3)**	**2007 per Capita Energy Use MWh**	**10 Percent Reduction per Capita Energy Use MWh**	**Energy Use Goal 2015 MWh**	**PJM Derived Energy Use Forecast 2015 MWh (4)**	**Difference Between Goal and PJM Derived Forecast MWh**
BGE	33,112,453	5.69%	35,109,765	2,618,715	2,778,350	13.41	12.07	**33,525,028**	**37,118,778**	**3,593,750**
Pepco	15,651,105	5.25%	16,518,897	1,772,292	1,894,550	9.32	8.39	**15,892,578**	**17,131,686**	**1,239,108**
PE	7,045,209	9.63%	7,795,557	422,227	464,516	18.46	16.62	**7,718,695**	**8,133,924**	**415,228**
Delmarva	4,410,698	5.83%	4,683,582	341,860	366,380	13.70	12.33	**4,517,572**	**4,661,025**	**143,453**
SMECO	3,464,094	5.99%	3,684,887	328,537	371,750	11.22	10.09	**3,752,609**	**3,836,480**	**83,870**
Choptank	957,285	7.11%	1,030,556	75,221	87,652	13.70	12.33	**1,080,769**	**1,099,423**	**18,654**
Hagerstown	355,623	3.56%	368,769	39,544	42,477	9.33	8.39	**356,509**	**393,169**	**36,660**
Easton	274,392	5.18%	289,373	14,289	16,640	20.25	18.23	**303,288**	**300,271**	**-3,018**
Thurmont	86,870	4.92%	91,364	6,057	6,823	15.08	13.58	**92,632**	**95,784**	**3,152**
Berlin	40,260	7.94%	43,732	3,957	4,742	11.05	9.95	**47,164**	**47,574**	**411**
Williamsport	20,083	7.79%	21,780	2,282	2,291	9.54	8.59	**19,680**	**21,475**	**1,796**
Somerset	7,343	5.67%	7,784	1,844	1,893	4.22	3.80	**7,192**	**8,868**	**1,677**
A&N Coop	3,343	6.43%	3,572	386	386	9.25	8.33	**3,215**	**3,785**	**570**
								67,316,932	**72,852,242**	**5,535,310**

(1) Energy Use is 2007 total usage, not weather normalized, Choptank, Somerset and A&N have not provided responses to DR No. 3. Values are from DR No. 2.
(2) Loss Factors are from data request for preparation of the Unaccounted for Electricity Report.
(3) Based on the U.S. Census Bureau's population estimates for July 1, 2007 for state (revised December 2010, released March, 2011).
2015 Populations projections are from the Maryland Department of Planning - Population Forecast - revised November 2010
(4) PJM forecast is from the January 2011 load and energy forecast and is for the entire BGE, DPL, PE, and Pepco Zones.
Staff applied these zonal growth rates to the appropriate utilities 2007 weather normal peak demand and weather normal energy sales to produce the utility 2015 forecast for peak demand and energy sales. For example, because Hagerstown is a part of the PE Zone, Staff applied the PJM growth rate for peak demand and energy sales to the 2010 weather normal peak demand and energy sales provided by Hagerstown in response to DR No. 6.

Table 28. Fifteen Percent Reduction per Capita Peak Demand

EmPower Maryland - 15 Percent Reduction in Maryland Peak Demand 2015								
2007 Utility Company Data Request Information								
Maryland Utility	**2007 Peak Demand Weather Normalized (1)**	**2007 Estimated Population (2)**	**2015 Estimated Population (2)**	**2007 per Capita Peak Demand MW**	**15 Percent Reduction per Capita Peak Demand MW**	**Peak Demand Goal 2015 MW**	**PJM Derived Peak Demand Forecast 2015 MW (3)**	**Difference Between Goal and PJM Derived Forecast MW**
BGE	7,260.000	2,618,715	2,778,350	0.0028	0.0024	**6,547**	**7,814**	**1,267**
Pepco	3,471.000	1,772,292	1,894,550	0.0020	0.0017	**3,154**	**3,826**	**672**
PE	1,418.000	422,227	464,516	0.0034	0.0029	**1,326**	**1,347**	**21**
Delmarva	1,068.000	337,934	369,608	0.0032	0.0027	**993**	**1,011**	**18**
SMECO	748.700	328,537	371,750	0.0023	0.0019	**720**	**859**	**139**
Choptank	250.134	79,147	84,424	0.0032	0.0027	**227**	**230**	**3**
Hagerstown	73.992	39,544	42,477	0.0019	0.0016	**68**	**75**	**7**
Easton	64.820	14,289	16,640	0.0045	0.0039	**64**	**67**	**3**
Thurmont	16.600	6,057	6,823	0.0027	0.0023	**16**	**21**	**5**
Berlin	9.143	3,957	4,742	0.0023	0.0020	**9**	**11**	**2**
Williamsport	4.086	2,282	2,291	0.0018	0.0015	**3**	**5**	**1**
Somerset	2.055	1,844	1,893	0.0011	0.0009	**2**	**2**	**0**
A&N Coop	0.810	386	386	0.0021	0.0018	**1**	**1**	**0**
						13,130	**15,269**	**2,139**

(1) Peak Demand is Electric Company demand, coincident with PJM peak demand at 5 p.m. EDT on August 8, 2007.
Choptank, Hagerstown, Thurmont, Williamsport, Somerset, and A&N did not provide weather-normalized Peak Demand to DR No. 3.

(2) Based on the U.S. Census Bureau's population estimates for July 1, 2007 for state (revised December 2010, released March, 2011).
2015 Populations projections are from the Maryland Department of Planning - Population Forecast - revised November 2010

(3) PJM forecast is from the January 2011 load and energy forecast and is for the entire BGE, DPL, PE, and Pepco Zones.
Staff applied these zonal growth rates to the appropriate utilities 2007 weather normal peak demand and weather normal energy sales to produce the utility 2015 forecast for peak demand and energy sales. For example, because Hagerstown is a part of the PE Zone, Staff applied the PJM growth rate for peak demand and energy sales to the 2010 weather normal peak demand and weather normal energy sales provided by Hagerstown in response to DR No. 6.

Table 29 presents the per capita electricity consumption for all Maryland utilities in 2014, and compares the reported 2014 per capita values to the 2007 per capita baseline values to gauge the progress that has been made towards achieving the 2015 EmPOWER Maryland per capita energy use goals. The Act measures success based on a per capita basis derived from a 2007 electricity use baseline. However, it is important to note that independent variables such as the State's economic activity and energy prices may influence electricity sales, which are used to calculate the per capita figures reflected in the below tables. Furthermore, electricity sales are not weather-normalized, and therefore, will fluctuate depending upon the weather, which likely further complicates the exercise of calculating energy savings attributable to EmPOWER Maryland.

BGE's 2014 per capita results continue to provide a direct example of the disconnect between the current method of assessing EmPOWER program achievement on a per capita basis. In 2014, the Commission calculated BGE's per capita energy use at 11.86 MWh, which is an 11.5% reduction of the 2007 per capita energy use. In other words, based on 2014 energy sales and population numbers, BGE has already achieved the 10% reduction goal in per capita energy use. However, BGE's reported program-to-date energy savings are only 62% of the 2015 overall energy reduction goal, which was calculated using a projection based on 2011 energy sales and an estimate of 2015 population based on the 2010 census.

Table 30 presents the per capita peak demand for all Maryland utilities in 2014, and compares the reported 2014 per capita values to the 2007 per capita baseline values to gauge the progress that has been made towards achieving the 2015 EmPOWER Maryland per capita peak demand goals. Since peak demand *is* weather-normalized, the peak demand reduction values reported in the EmPOWER Maryland programs should be more in line with the per capita reduction goal values. However, there is a similar disconnect between the Utilities achieving the per capita peak demand reductions required by the EmPOWER Act. For example, BGE has a per capita peak demand that is 18.2% lower than the 2007 baseline, or 121% of the 15% EmPOWER peak demand reduction goal. However, as of the end of 2014, BGE has only reached 78% of the overall MW reduction goal through its EmPOWER Maryland programs. There are several reasons for this difference: (1) there are MW reductions occurring in BGE's service territory that are not counted by EmPOWER Maryland, including activity by competitive service providers[68] and the installation of solar power panels; and (2) the per capita calculation requires a population estimate for each service territory. If the population in a service territory grows at a faster rate than the peak demand of the service territory, the per capita peak demand will decrease solely on the basis of the growing population and not as a result of program participation. These two factors may explain why BGE is achieving the per capita peak demand reduction goal, but only achieving 78% of the aggregated MW reduction goal.

[68] The competitive service providers offer demand response services to primarily commercial customers in the EmPOWER Maryland utility service territories.

Table 29. 2014 Per Capita Energy Use Compared to 2015 EmPOWER Maryland Goal

EmPower Maryland - 10 Percent Reduction in Maryland Energy Sales 2015												
2014 Utility Company Data Request Information												
Maryland Utility	**2007 per Capita Energy Use MWh**	**2015 per Capita Energy Use Goal MWh**	**2015 per Capita Energy Reduction Target MWh (1)**	**2014 Energy Sales Gross-Up by Loss Factor MWh**	**2014 Estimated Population (2)**	**2014 per Capita Energy Use MWh**	**Percentage Reduced from 2007 Baseline (3)**	**Percentage of Per Capita Energy Savings Achieved Towards 2015 Reduction Target (4)**		**2015 Energy Sales Goal MWh**	**Difference Between 2014 Use and 2015 Goal MWh**	**2015 Energy Reduction Goal MWh**	**Utility Reported Savings Program-to-Date**
BGE	13.41	12.07	1.34	32,494,421	2,739,247	11.86	11.5%	115.2%		33,525,028	-1,030,607	3,593,750	2,230,161
Pepco	9.32	8.39	0.93	15,047,741	1,927,854	7.81	16.3%	162.6%		15,892,578	-844,837	1,239,108	1,162,360
PE	18.46	16.62	1.85	7,856,178	445,468	17.64	4.5%	44.8%		7,718,695	137,483	415,228	495,264
Delmarva	13.70	12.33	1.37	4,396,737	350,277	12.55	8.4%	83.8%		4,517,572	-120,835	143,453	271,180
SMECO	11.22	10.09	1.12	3,640,659	356,607	10.21	9.0%	89.8%		3,752,609	-111,950	83,870	220,975
Choptank	13.70	12.33	1.37	1,019,546	81,225	12.55	8.4%	83.8%		1,080,769	-61,223	18,654	
Hagerstown	9.33	8.39	0.93	308,773	40,613	7.60	18.5%	184.7%		356,509	-47,736	36,660	
Easton	20.25	18.23	2.03	273,784	16,688	16.41	19.0%	189.9%		303,288	-29,504	-3,018	
Thurmont	15.08	13.58	1.51	83,420	6,409	13.02	13.7%	137.1%		92,632	-9,212	3,152	
Berlin	11.05	9.95	1.11	45,155	4,563	9.90	10.5%	104.6%		47,164	-2,009	411	
Williamsport	9.54	8.59	0.95	21,690	2,156	10.06	-5.4%	-54.0%		19,680	2,010	1,796	
Somerset	4.22	3.80	0.42	-	1,860	0.00	100.0%	1000.0%		7,192	-7,192	1,677	
A&N Coop	9.25	8.33	0.93	3,053	276	11.06	-19.5%	-195.4%		3,215	-162	570	
Total	**12.38**	**11.14**	**1.24**	**65,191,158**	**5,973,242**	**10.91**	**11.8%**	**118.2%**		**67,316,932**	**-2,125,774**	**5,535,310**	**4,379,939**

(1) The 2015 per Capita Energy Reduction Target Column is the difference between the 2007 per Capita Energy Use and 2015 per Capita Energy Use Goal. For example, for BGE to reach its 2015 per capita energy use goal of 12.07 MWh, BGE would have to achieve a reduction of 1.34 MWh off the 2007 baseline per capita energy use of 13.41.

(2) Sources: U.S. Census Bureau and Maryland Department of Planning.

(3) Percentage Reduced from the 2007 Baseline Column, calculates the percentage the 2014 per Capita Energy Use is from the 2007 per Capita Energy use Column. For example, BGE's 2014 per Capita Energy use is 11.5 % lower than BGE's 2007 per capita energy use.

(4) Percentage of Per Capita Energy Savings Towards 2015 Reduction Target Column, calculates the Percentage Reduced from 2007 Baseline as a percentage of the 10% EmPower Maryland goal. For example, in 2014 BGE's per capita energy use was 11.5% lower than the 2007 per capita energy use baseline. In other words, in 2014, BGE achieved 11.5% of the 10% EmPower Maryland goal, which is equivalent to reaching 115.2% of the 2105 per capita energy reduction target.

Table 30. 2014 Per Capita Peak Demand Compared to 2015 EmPOWER Maryland Goal

EmPower Maryland - 15 Percent Reduction in Maryland Peak Demand 2015													
2014 Utility Company Data Request Information													
Maryland Utility	2007 per Capita Peak Demand MW	2015 per Capita Peak Demand Goal MW	2015 per Capita Demand Reduction Target MW (1)	2014 Peak Demand Weather Normalized	2014 Estimated Population (2)	2014 per Capita Peak Demand MW	Percentage Reduced from 2007 Baseline (3)	Percentage of Per Capita Peak Demand Savings Achieved Towards 2015 Reduction Target (4)		2015 Peak Demand Goal MW	Difference Between 2014 Use and 2015 Goal	2015 Peak Demand Reduction Goal	Utility Reported Savings Program-to-Date
BGE	0.0028	0.0024	0.0004	6,212	2,739,247	0.0023	18.2%	121.3%		6,547	-335	1,267	988
Pepco	0.0020	0.0017	0.0003	3,024	1,927,854	0.0016	19.9%	132.7%		3,154	-130	672	517
PE	0.0034	0.0029	0.0005	1,169	445,468	0.0026	21.9%	145.7%		1,326	-157	21	75
Delmarva	0.0032	0.0027	0.0005	917	356,318	0.0026	18.6%	123.8%		993	-76	18	77
SMECO[5]	0.0023	0.0019	0.0003	689	356,607	0.0019	15.2%	101.2%		720	-31	139	86
Choptank[5]	0.0032	0.0027	0.0005	210	75,183	0.0028	11.7%	78.2%		227	-17	3	
Hagerstown[5]	0.0019	0.0016	0.0003	52	40,613	0.0013	31.8%	212.3%		68	-16	7	
Easton[5]	0.0045	0.0039	0.0007	54	16,688	0.0033	28.1%	187.6%		64	-10	3	
Thurmont[5]	0.0027	0.0023	0.0004	13	6,409	0.0020	27.1%	180.9%		15.9	-3	5	
Berlin[3]	0.0023	0.0020	0.0003	10	4,563	0.0021	8.6%	57.0%		9.3	0	2	
Williamsport[5]	0.0018	0.0015	0.0003	3	2,156	0.0015	17.3%	115.1%		3.5	0	1	
Somerset[5]	0.0011	0.0009	0.0002		1,860	0.0000	100.0%	666.7%		1.8	-2	0	
A&N Coop[5]	0.0021	0.0018	0.0003		276	N/A	N/A	N/A		0.7	0	0	
Total	**0.0026**	**0.0022**	**0.0004**	**12,353.198**	**5,973,242**	**0.0021**	**19.1%**	**127.4%**		**13,130**	**-777**	**2,139**	**1,743**

(1) The 2015 per Capita Peak Demand Reduction Target Column is the difference between the 2007 per Capita Peak Demand and 2015 per Capita Peak Demand Goal. For example, for BGE to reach its 2015 per capita Peak Demand goal of 0.0024 MW, BGE would have to achieve a reduction of 0.0004 MW off the 2007 baseline per capita peak demand of 0.0028 MW.

(2) Sources: U.S. Census Bureau and Maryland Department of Planning.

(3) Percentage Reduced from the 2007 Baseline Column, calculates the percentage the 2014 per Capita Peak Demand is from the 2007 per Capita Peak Demand Column. For exmple, BGE's 2014 per Capita Peak Demand is 18.2% lower than BGE's 2007 per Capita Peak Demand.

(4) Percentage of Per Capita Peak Demand Savings Towards 2015 Reduction Target Column, calculates the Percentage Reduced from 2007 Baseline as a percentage of the 15% EmPower Maryland goal. For example, in 2014 BGE's per capita peak demand was 18.2 lower than the 2007 per capita peak demand baseline. In other words, in 2014, BGE achieved 18.2% of the 15% EmPower Maryland goal, which is equivalent to reaching 121.3% of the 2015 per capita peak demand target.

(5) Utilities did not provide weather normal peak demand data.

Tables 31 and 32 compare the 2007 per capita energy use and peak demand with that of 2008, 2009, 2010, 2011, 2012, 2013 and 2014. A majority of the State's electric utilities experienced a decrease in per capita energy use and per capita peak demand compared to 2013 levels. This decrease could be attributable to generally cooler summer weather in 2014 as compared to that experienced during the summer of 2013.

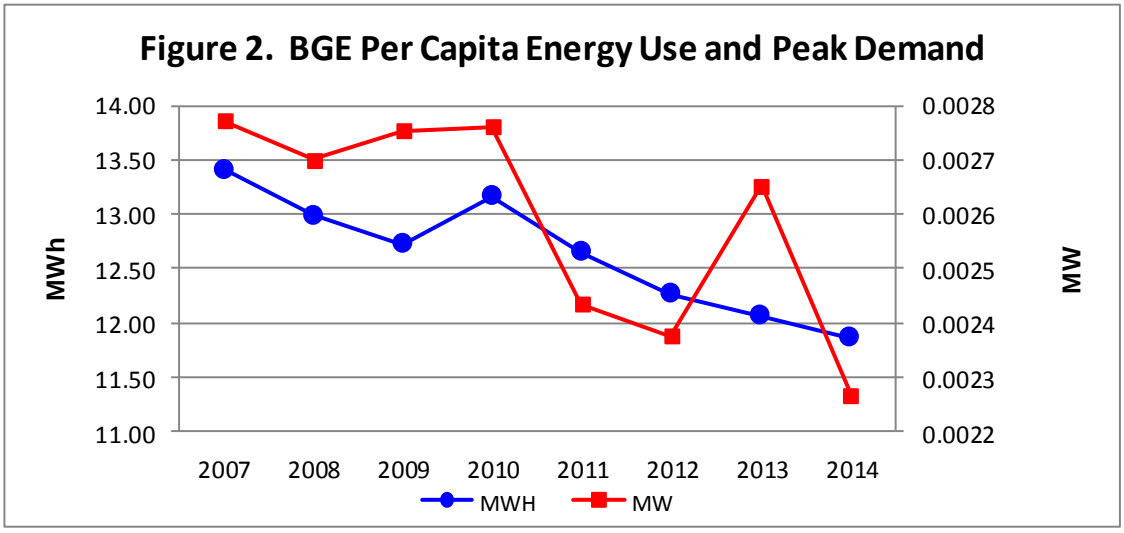
Table 31. 2007-2014 per Capita Energy Consumption

Maryland Utility	Per Capita Energy Use MWh							
	2007	2008	2009	2010	2011	2012	2013	2014
BGE	13.41	12.99	12.72	13.17	12.65	12.26	12.06	11.86
Pepco	9.32	9.05	8.81	8.97	8.91	8.18	8.10	7.81
PE	18.46	19.49	18.86	19.39	17.17	16.93	17.53	17.64
Delmarva	13.70	12.60	12.83	13.14	13.02	12.61	12.60	12.55
SMECO	11.22	10.57	10.47	10.83	10.85	10.61	10.49	10.21
Choptank	13.70	12.65	12.79	13.06	12.58	12.31	12.92	12.55
Hagerstown	9.33	9.01	8.67	8.95	8.37	7.93	7.71	7.60
Easton	20.25	19.23	17.82	18.48	16.59	16.65	16.52	16.41
Thurmont	15.08	14.53	14.26	14.37	13.73	13.02	13.27	13.02
Berlin	11.05	10.60	9.93	10.84	9.31	9.40	9.37	9.90
Williamsport	9.54	8.92	8.37	8.56	9.20	9.44	9.87	10.06
Somerset	4.22	N/A	N/A	4.48	4.49	N/A	N/A	0.00
A&N Coop	9.25	11.10	9.52	8.87	8.05	10.83	10.81	11.06

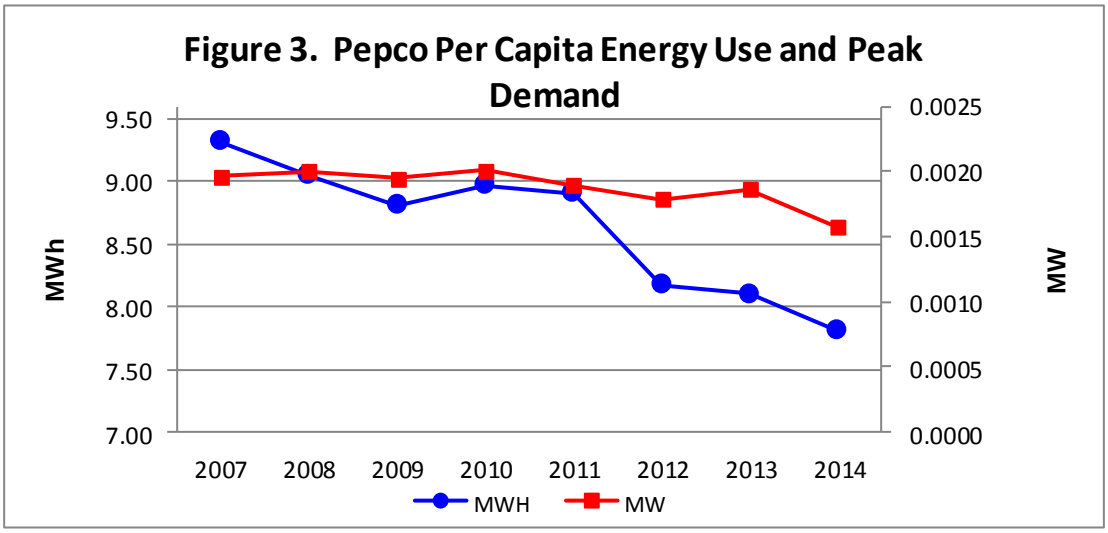
Table 32. 2007-2014 per Capita Peak Demand

Maryland Utility	Per Capita Peak Demand MW							
	2007	2008	2009	2010	2011	2012	2013	2014
BGE	0.0028	0.0027	0.0028	0.0028	0.0024	0.0024	0.0027	0.0023
Pepco	0.0020	0.0020	0.0019	0.0020	0.0019	0.0018	0.0019	0.0016
PE	0.0034	0.0034	0.0030	0.0029	0.0032	0.0033	0.0032	0.0026
Delmarva	0.0032	0.0028	0.0028	0.0028	0.0025	0.0028	0.0029	0.0026
SMECO	0.0023	0.0023	0.0022	0.0024	0.0023	0.0022	0.0024	0.0019
Choptank	0.0032	0.0027	0.0028	0.0024	0.0032	0.0032	0.0032	0.0028
Hagerstown	0.0019	0.0018	0.0017	0.0018	0.0016	0.0016	0.0015	0.0013
Easton	0.0045	0.0044	0.0039	0.0041	0.0038	0.0041	0.0038	0.0033
Thurmont	0.0027	0.0032	0.0022	0.0032	0.0026	0.0024	0.0024	0.0020
Berlin	0.0023	0.0024	0.0023	0.0026	0.0020	0.0024	0.0021	0.0021
Williamsport	0.0018	0.0020	0.0015	0.0019	0.0016	0.0016	0.0019	0.0015
Somerset	0.0011	N/A	N/A	0.0011	0.0010	N/A	N/A	N/A
A&N Coop	0.0021	0.0023	N/A	N/A	N/A	N/A	N/A	N/A

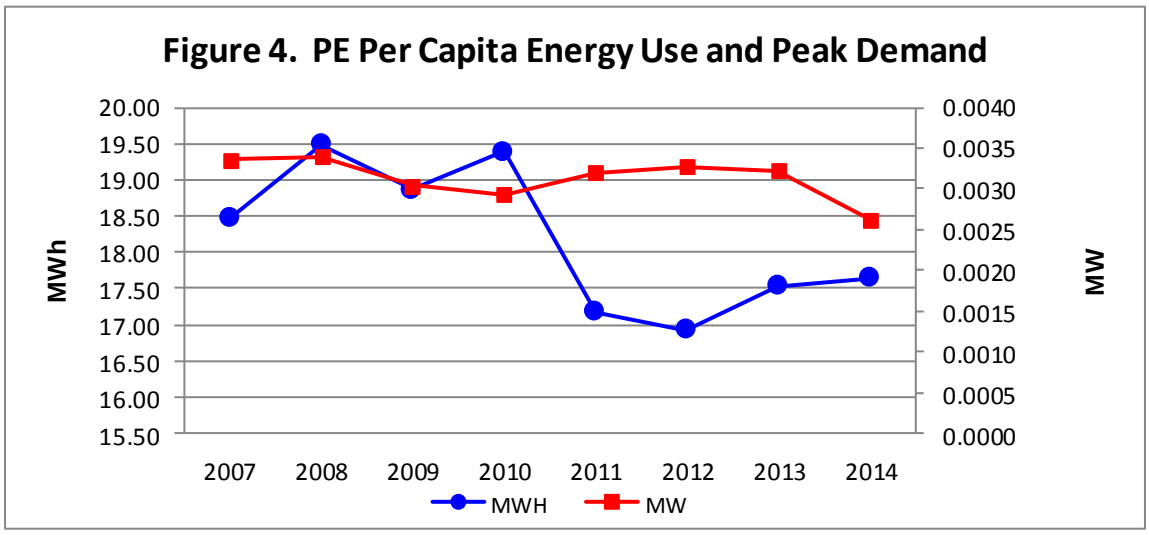
The following five charts provide a graphical representation of Tables 28 and 29 for the five EmPOWER Maryland Utilities. As discussed earlier in this report, the graphs will illustrate how the per capita energy savings value is affected by the weather, as evidenced by a spike in per capita energy use in 2010 for each utility experiencing a warmer-than-normal summer and a cooler-than-normal winter.



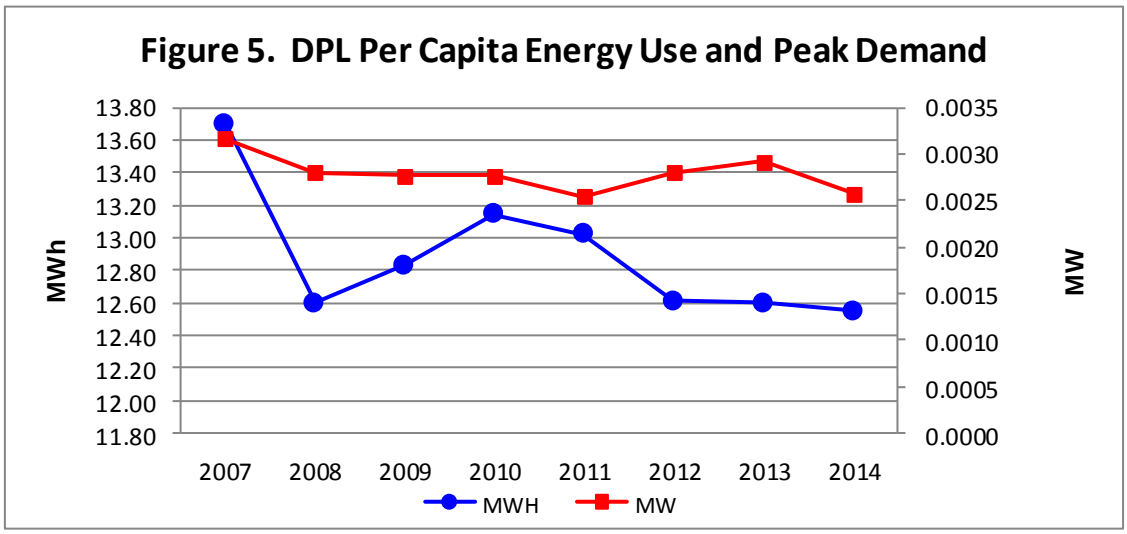
BGE's per capita goal for energy use is 12.07 MWh
BGE's per capita goal for peak demand reduction is 0.0024 MW



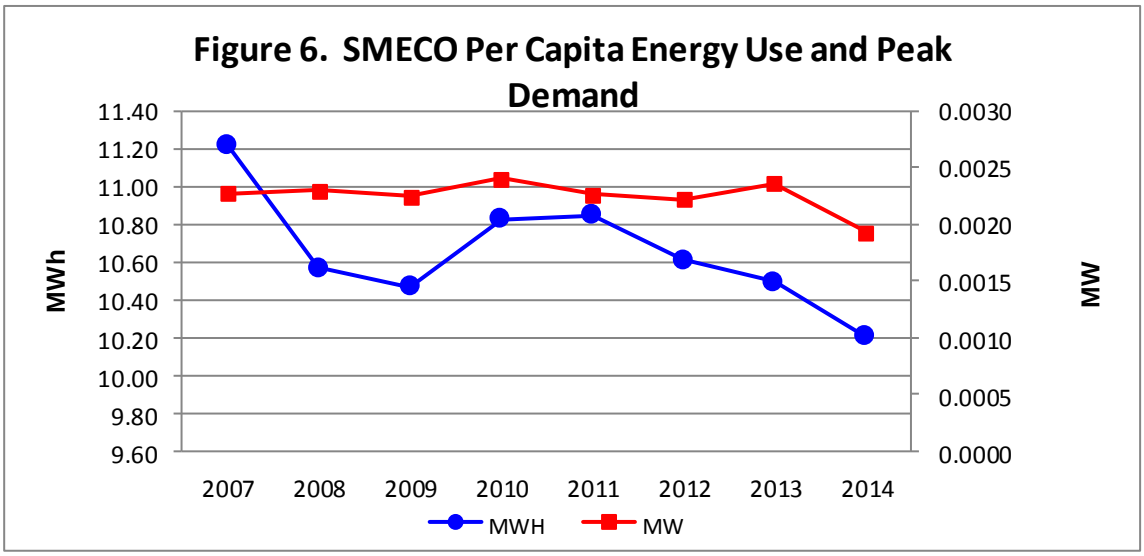
Pepco's per capita goal for energy use is 8.39 MWh
Pepco's per capita goal for peak demand reduction is 0.0017 MW



PE's per capita goal for energy use is 16.62 MWh
PE's per capita goal for peak demand reduction is 0.0029 MW



DPL's per capita goal for energy use is 12.33 MWh
DPL's per capita goal for peak demand reduction is 0.0027 MW



SMECO's per capita goal for energy use is 10.09 MWh
SMECO's per capita goal for peak demand reduction is 0.0019 MW

Upcoming Milestones

On December 23, 2014, the Commission issued Order No. 86785, authorizing BGE, PE, Pepco, DPL, and SMECO to begin transitioning into the next three-year program cycle. The Commission also authorized DHCD to continue its implementation of the EmPOWER Maryland limited-income programs for calendar year 2015. Furthermore, the Commission granted the application of WGL for approval of its natural gas energy efficiency and conservation program, as well as the accompanying cost recovery mechanism. Lastly as part of the Order, the Commission requested stakeholder feedback regarding future cost-effectiveness screening methodologies and the development of post-2015 energy efficiency goals. Hearings for these two issues were held February 12 and 13, 2015.

- EmPOWER Maryland Work Groups – In Order No. 86785, the Commission directed the various EmPOWER Maryland work groups to investigate 15 specific tasks designed to improve EmPOWER programmatic performance, with tasks ranging from investigating the appropriate incentive structure of the small business program to pursuing alternative methods to provide energy efficiency education through schools in the State. The majority of the tasks have a reporting date of April 15, 2015, and will be reviewed as part of the Commission's spring semi-annual hearings.

- EmPOWER Maryland Cost-Effectiveness Screening Tools and Post-2015 Goals – In Order No. 86785, the Commission requested stakeholder feedback regarding future cost-effectiveness screening methodologies and the development of post-2015 energy efficiency goals. Hearings for these two issues were held February 12 and 13, 2015.

- EmPOWER Program Modifications – The Commission will continue to review requests by the Utilities to modify the currently approved EmPOWER Maryland programs. These modifications can include, but are not limited to: changes in program design and implementation; changes to program budgets; and changes to program incentive structures.