PUBLIC SERVICE COMMISSION OF MARYLAND

The EmPOWER Maryland Energy Efficiency Act STANDARD REPORT OF 2014

With Data for Compliance Year 2013

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

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Report Contents

This document constitutes the 2014 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[1] ("MEA"), 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 on per capita energy consumption and a 15% reduction in per capita peak demand by the end of 2015 from the energy consumption and peak demand in 2007. As mandated by the EmPOWER Maryland Act, the utilities are responsible for a 10% reduction in the per capita energy consumption[2] and all of the 15% per capita peak demand reductions by 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 Advance Metering Infrastructure ("AMI") initiatives, and information on forthcoming milestones.

Executive Summary

2013 marked the second year in the second EmPOWER Maryland program cycle[3], with the five largest electric utilities[4] (hereinafter "utilities") fully implementing their Commission-approved EmPOWER Maryland EE&C portfolios[5] and four utilities offering DR programs.[6] For the first time since the utilities began offering EmPOWER programs in 2009, the reported annual energy savings exceeded one million megawatt hours ("MWh") in a given program year. Energy

[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. At the time of this Report, MEA had not provided its plan to achieve the 5% energy consumption reduction as required by the EmPOWER Maryland Act.
[3] Program cycles run for three years. The current program cycle runs from calendar year 2012 through 2014.
[4] The 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").
[5] The five utilities with approved EE&C programs are: PE: Case 9153; BGE: Case 9154; Pepco: Case No. 9155; DPL: Case 9156; and SMECO: Case 9157.
[6] The four utilities with approved DR programs are BGE, Pepco, DPL, and SMECO.

savings in 2013 exceeded that of 2012 by 31%. Due to the improvement this year, and the improvement in 2012 of 36%, the utilities, combined, have reached 61% of the 2015 EmPOWER Maryland energy reduction goal. If the utilities can perform at a slightly higher rate in 2014, they may reach the 2015 EmPOWER Maryland energy reduction goal. At the end of 2013, the utilities were approximately 2.1 million MWh short of the 2015 energy reduction goal. This would require the utilities to achieve energy reductions of 1.072 million MWh in 2014 and 2015, slightly more than the 1.056 million MWh energy savings reported in 2013 (or approximately one percent more over current performance). For the most part, peak demand reductions fell short of 2013 forecasts, as the utility Direct Load Control ("DLC") programs approach saturation levels (the number of actual participants is approaching the number of expected program participants). However, Pepco reported over 300 MW of peak demand reductions from its smart grid enabled dynamic pricing program. 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 this one program,[7] the utilities achieved 264% of the 2013 demand reduction target and are at 73% of the 2015 demand reduction goal.[8]

2014 marks the final year of the 2012-2014 EmPOWER Maryland program cycle, and the programs are approaching the critical year of 2015, which is the deadline to meet the per capita energy reduction and peak demand reduction goals of the EmPOWER statute. Looking beyond 2015, the Commission has directed the EmPOWER Maryland Work Group to develop programs, energy and demand reduction goals for the 2015-2017 EmPOWER cycle. The utilities will file their 2015-2017 plans by September 1, 2014 and the Work Group will file the recommended EmPOWER goals beyond 2015 in a similar time frame.

Initiative Highlights

- Program-to-date, the utilities' EmPOWER Maryland programs have saved a total of 3,329,575 megawatt hours ("MWh") and 1,538 megawatts ("MW") (see Table 1[9] on the following page for individual utility savings).

- The utilities, to date, have spent over $988 million on the EmPOWER Maryland programs, including approximately $567 million on EE&C programs, and $420 million on DR programs.

- Program-to-date, 11,477 low-income customers participated through the Residential Low-Income Programs, of that 2,952 participated in 2013.

- The average monthly residential surcharge bill impacts[10] for 2013 were as follows:

[7] BGE and DPL will also have fully implemented dynamic pricing programs in 2014 and 2015.
[8] Without the MW reduction attributed to Pepco's dynamic pricing program, the utilities would not have met their 2013 peak demand reduction target (at 91%), and only 59% of the 2015 EmPOWER Maryland peak demand reduction goal.
[9] Table 1 displays energy savings at Gross Wholesale level. The energy savings in the Gross Wholesale level do not include Net-to Gross ratios.
[10] Bill impacts are calculated assuming an average residential monthly usage of 1,000 kilowatt-hours ("kWh"). Impact does not reflect savings produced by EmPOWER Maryland programs through reduced customer usage or energy rate reductions due to reduced system demand.

	EE&C	DR	Dynamic Pricing[11]	Total
BGE	$2.00	$1.02	N/A	$3.02
Pepco	$1.28	$0.07	$0.46	$1.81
DPL	$1.56	$1.15	N/A	$2.71
PE	$2.44	N/A	N/A	$2.44
SMECO	$3.17	$2.30	N/A	$5.47

Table 1. EE&C and Demand Response Reported Achievements

	2013 Reported Reduction*	Program-to-Date Reduction**	2012-2014 Interim Target***	Percentage of 2015 Goal
BGE				
Electric Consumption (MWh)	467,453	1,816,124	85%	51%
Demand Reduction (MW)	-7.042	748.730	5%	59%
Pepco				
Electric Consumption (MWh)	320,243	806,041	99%	65%
Demand Reduction (MW)****	414.857	603.299	114%	90%
PE				
Electric Consumption (MWh)	141,506	390,475	107%	94%
Demand Reduction (MW)	17.602	55.481	108%	264%
DPL				
Electric Consumption (MWh)	67,449	153,208	52%	107%
Demand Reduction (MW)	19.143	56.457	31%	314%
SMECO				
Electric Consumption (MWh)	60,019	163,727	113%	195%
Demand Reduction (MW)	14.716	74.086	91%	53%
Total				
Electric Consumption (MWh)	1,056,670	3,329,575	89%	61%
Demand Reduction (MW)	459.276	1,538.053	45%	73%

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

[11] Pepco offered a Peak Time Rebate pilot program in the summer of 2012 for 5,000 customers with activated smart meters. The difference between rebates paid to participants and revenues received from PJM markets are trued-up in the EmPOWER Maryland surcharge.

** 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.
**** Over 300 MW reduction for Pepco in 2013 was the result of MW reductions achieved based on the Company's dynamic pricing program, which are a one-time savings and cannot be expected to achieve the same amount of MW reductions per event due to the voluntary nature of the program. This differs from the Energy Wise Reward program, in which Pepco pays customers an incentive to control their central air conditioner during an event, which has a repeatable MW reduction.

EmPOWER Maryland Portfolios

The Commission directed Maryland's investor-owned utilities and SMECO to meet EmPOWER Maryland's 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. The requirement that programs be cost-effective is an important point of context, as it explains in part why the Companies' approved plans were not expected to meet or surpass the EmPOWER Maryland goals.

Prior to approving the 2012-2014 EmPOWER Maryland plans, the Commission estimated the share of the EmPOWER Maryland energy and demand savings goals per utility service territory.[12] Based on each utility's plan, Table 2 illustrates the utility's forecasted 2015 peak demand reductions and energy savings achievements for the Commission-approved EE&C and DR programs as a percentage compared against the EmPOWER Maryland goals. In aggregate, the forecasted reductions in the utility plans indicate that the utilities are expected to fall slightly short of their peak demand reduction goals for 2015, and only reach approximately 69% of the energy savings. The majority of peak demand savings is derived from the direct load control programs; however, all four direct load control programs are approaching market saturation. In order to reach the 15% EmPOWER demand reduction goals, the utilities will be more dependent on smart grid enabled dynamic pricing programs and other programs such as Conservation Voltage Reduction programs. For all programs, consumer participation (estimated conservatively in the utilities' plans) will be a key variable in determining how quickly energy savings and demand reductions accrue, but it should be noted that still more additional programs or initiatives are necessary to achieve the 2015 energy savings goals.

[12] *Notice of EmPOWER Maryland Plan Consumption and Demand Reduction Targets*, issued August 15, 2008.

Table 2. EE&C and Demand Response Forecasted Achievements in 2009-2015 EmPOWER Plans (as a Percentage of EmPOWER Maryland Goal)[13]

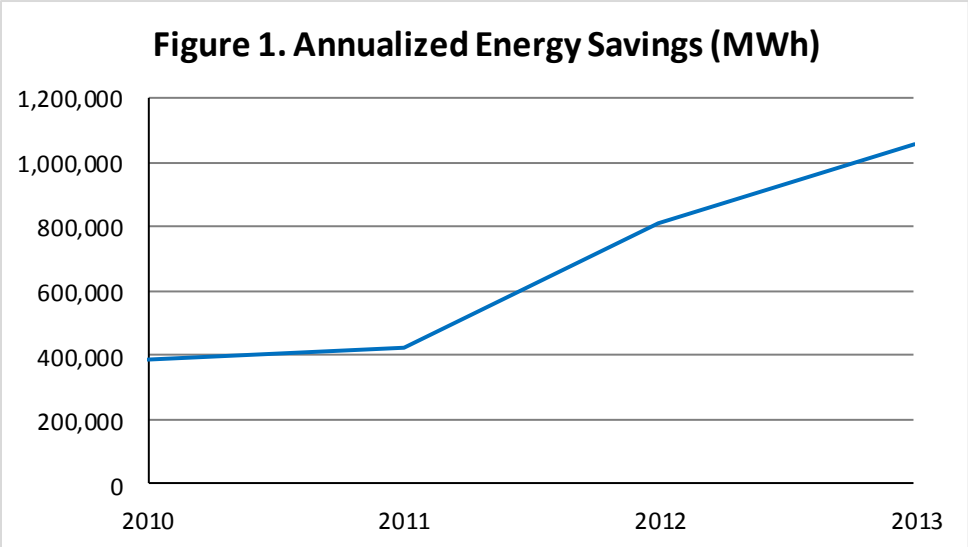
	Total Annualized Energy Savings Forecasted	Percentage of Annualized Energy Savings Compared to the 2015 Goal	Total Coincident Peak Demand Reduction Forecasted	Percentage of Coincident Peak Demand Reduction Compared to the 2015 Goal
BGE	2,407,969	67%	960.904	76%
Pepco	1,230,830	99%	647.502	96%
PE	434,249	104%	56.348	268%
DPL	286,474	199%	149.444	830%
SMECO	190,260	227%	79.514	57%
Total	4,549,782	83%	1,893.71	89%

Table 1 indicates that the reported energy and peak demand reductions program-to-date achieved 61% and 73% of the 2015 goals, respectively. Consideration of Table 2 reflects that the forecasted energy and peak demand reductions achievable as a result of approved 2012-2014 program cycle plans may allow the utilities to reach 83% and 89% of the 2015 goals, respectively. The late start of the programs[14] contributed significantly to shortcomings, although recent acceleration of progress indicates that the utilities are now within reasonable reach of meeting the 2015 goals.

In 2013, all of the utilities' approved EmPOWER Maryland programs were operational for the entire year, which resulted in an increase of reported energy savings of over 31% compared to 2012. Figure 1 illustrates the trend in the EmPOWER Maryland program in increasing annualized energy savings on a year-to-year basis.

[13] Energy savings and peak demand savings forecasted through 2015 were compiled using values from the Utility's individual Portfolios and updated based upon the programs approved by the Commission throughout 2013. Savings contributed in 2015 was forecasted under the assumption that the proposed programs for the 2012-2014 Program Cycle would continue into the 2015 Program Year.

[14] The late start for some of the utilities is because the Commission directed Pepco, PE, DPL, and SMECO to refile the plans with updated cost information based on final selection of implementation contractors to better judge the overall costs and cost effectiveness of the proposals.



In order to verify the utilities' energy and peak demand savings resulting from each utility's EE&C and DR programs, the Commission has developed an Evaluation, Measurement & Verification ("EM&V") process for the EmPOWER programs. 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 State's energy consumption[15] and all of the 15% of the required demand reductions by 2015. To generate a portion of this savings, the five utilities each developed EE&C portfolios, based on a three-year planning cycle beginning with the Program Planning Year ("PY") 2009 – 2011 and then the PY 2012-2014. Plans for the PY 2012-2014 were approved by the Commission in Order No. 84569. Subsequent plans will be developed for later years.

The utilities' EmPOWER Maryland portfolios were similarly designed with some variation in execution based upon the demographic of the service territory. Residential EE&C programs include discounted compact fluorescent lights ("CFLs") and appliances; heating, ventilation, and air conditioning ("HVAC") rebates; home energy audits; weatherization; and low-income programs.[16] Commercial EE&C programs are designed to encourage businesses to upgrade to more efficient equipment, such as lighting or HVAC, or improve their building performance through weatherization or building shell upgrades. For larger commercial buildings or industrial facilities, a utility can customize its incentives for cost-effective improvements.

[15] The EmPOWER Maryland Act calls for MEA to provide 5% of the 15% per capita energy consumption reduction goal by 2015. At the time of this Report, MEA had not provided its plan to achieve the 5% energy consumption reduction as required by the EmPOWER Maryland Act.

[16] Other than the surcharge amounts charged to all ratepayers, low-income programs are offered at no additional cost for those who qualify.

BGE

BGE's current portfolio consists of seven residential and six commercial EE&C programs[17] designed to save approximately 2.4 million MWh by the end of 2015.[18] The Company continues to achieve the most energy savings and demand reductions to date.

BGE EmPOWER Programs

Residential Programs

Appliance Rebate

Appliance Recycling

Home Performance with Energy Star

HVAC

Lighting

New Homes

Quick Home Energy Check-up

Commercial Programs

Custom

New Construction

Prescriptive

Retrocommissioning

Small Business Solutions

Combined Heat and Power

BGE's Residential Retrofit program, the Quick Home Energy Check-up ("QHEC") Program, continued to be one of BGE's best performing programs. In 2013, the QHEC program reported 40,502 participants and over 518,329 measures installed and energy savings of 22,910 MWh, slightly missing the 2013 energy target of 23,715 MWh which was increased by 69% over the 2012 target. The Home Performance with ENERGY STAR Program, a more intensive, holistic Residential Retrofit program, improved over 2012 results and exceeded its participation and targeted measures. Energy savings were below projections, which is most likely due to lower acceptance levels of the higher cost measures, which account for the largest savings.

BGE's Commercial programs had an overall successful 2013, exceeding the forecasted energy savings by almost 15%. The Small Business program gained traction in 2013, with 2,591 participants and exceeding forecasted energy savings by 127%. There is some optimism that this trend in 2013 will continue into 2014, with an improving economy. Additionally, BGE has been reviewing numerous CHP proposals, 9 of which have been notified of pre-approval. These projects are expected to generate approximately 68,500 MWh in annualized energy savings.

As noted in Table 3, in 2013, BGE's EE&C programs achieved 108%, or 467,453 MWh, of its 2013 EE&C electric consumption reduction target. BGE's total portfolio of programs, including demand response, achieved 38% of its goal, after losing 7.042 MW towards its 2013 peak demand reduction target due to discontinuation of its commercial demand response activities and the departure of a number of residents from its PeakRewards program in 2013. BGE has installed approximately 90% of the forecasted load reduction devices. As BGE approaches forecasted participation, it is becoming more difficult to add the next participant, as BGE customers have been exposed to PeakReward's marketing messages for more than 7 years. BGE reached 51% and 59% of their 2015 goal for energy savings and demand, respectively.

[17] BGE has several programs, not funded through the EmPOWER Maryland surcharge, that contribute energy and demand savings towards the EmPOWER goal, including: streetlights, high efficient transformers, dynamic pricing, and behavioral programs. BGE is also conducting a conservation voltage reduction pilot and will be reporting savings in the near term.

[18] The forecasted savings number includes all Commission approved programs and program modifications for the 2012-2014 program cycle.

Table 3. BGE EE&C Interim Reported[19] Achievements

	2013 Electric Consumption Reduction (MWh)	Percentage of 2013 Target*	Program-to-Date Electric Consumption Reduction (MWh)***	Percentage of 2015 Goal
EmPOWER Maryland Targets**	431,709		3,593,750	
BGE Portfolio of Programs	467,453	108%	1,816,124	51%

*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.
*** 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.

Table 4. BGE Peak Demand Reduction Interim Reported Achievements[20]

	2013 Peak Demand Reduction (MW)	Percentage of 2013 Target*	Program-to-Date Peak Demand Reduction (MW)***	Percentage of 2015 Goal
EmPOWER Maryland Targets**	(18.224)		1,267	
BGE Portfolio of Programs	(7.042)	38%	749	59%

*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.
*** 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.

[19] Reported savings are unverified energy savings and demand reductions based the utilities' quarterly programmatic reports. An independent verification of savings is conducted annually.
[20] Demand Reduction Goals and Achievements include peak demand reduction generated by both EE&C and Demand Response Programs, as both components contribute towards achieving overall 2015 peak reduction goals.

Pepco

Pepco's current portfolio consists of eight residential and seven non-residential EE&C programs[21] designed to save approximately 1.2 million MWh by the end of 2015.[22] Opportunities range from using the information provided through customer information and education, to incentives to purchase lighting and energy-efficient HVAC, and housing or building upgrades.

Pepco 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

Retrocommissioning

Small Business

Among the residential programs, Pepco's most successful program to date is the Lighting and Appliance program. Pepco's Appliance Recycling program surpassed its forecasted demand savings projection during 2013 by over 100%, or 0.177 MW. Pepco's New Construction program performed well in 2013 when compared to 2012, with more than 120% increase in participants, a 59% increase in energy savings, and a 32% increase in demand savings.

In 2013, the Commercial programs reached 82% of forecasted energy savings, the highest level of savings obtained since Pepco began offering commercial programs, and double the energy savings compared to 2012. Among the commercial programs, Pepco's most successful program to date is the Small Business program. Pepco's Small Business program surpassed its forecasted energy savings during 2013 by over 250%, or 18,000 MWh, and its forecasted demand savings during 2013 by 330%, or 7 MW.

As noted in Table 5, in 2013, Pepco's EE&C programs achieved 103%, or 320,243 MWh, of its 2013 EE&C electric consumption reduction target. Pepco's portfolio of programs, including Demand Response, achieved 345%, or 414.857 MW of its 2013 peak demand reduction target, mostly due in part to more than 300 MW reduction from the dynamic pricing program, as noted in Table 6.[23] Pepco has reached 65% and 90% of their 2015 goal for energy savings and demand savings, respectively.

[21] Pepco has three programs, not funded through the EmPOWER Maryland surcharge, that contribute energy and demand savings towards the EmPOWER goal, including: streetlights, high efficient transformers and dynamic pricing. Pepco is also conducting a conservation voltage reduction pilot and will be reporting savings in the near term.

[22] The forecasted savings number includes all Commission approved programs and program modifications for the 2012-2014 program cycle.

[23] It is important to note that MW reductions from dynamic pricing are a one-time savings and cannot be expected to achieve the same amount of MW reductions per event due to the voluntary nature of the program. This is different from the Energy Wise Reward program where Pepco pays a customer an incentive to automatically control the central air conditioner during an event, which has a repeatable MW reduction.

Table 5. Pepco EE&C Energy Savings Interim Reported[24] Achievements

	2013 Electric Consumption Reduction (MWh)	Percentage of 2013 Target*	Program-to-Date Electric Consumption Reduction (MWh)***	Percentage of 2015 Goal
EmPOWER Maryland Targets**	310,415		1,239,108	
Pepco Portfolio of Programs	320,243	103%	806,041	65%

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

Table 6. Pepco Peak Demand Reduction Interim Reported Achievements[25]

	2013 Peak Demand Reduction (MW)	Percentage of 2013 Target*	Program-to-Date Peak Demand Reduction (MW)***	Percentage of 2015 Goal
EmPOWER Maryland Targets**	120.248		672.000	
Pepco Portfolio of Programs	414.857	345%	603.299	90%

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

[24] Reported savings are unverified energy savings and demand reductions based the utilities' quarterly programmatic reports. An independent verification of savings is conducted annually.
[25] Demand Reduction Goals and Achievements include peak demand reduction generated by both EE&C and Demand Response Programs, as both components contribute towards achieving the overall 2011 and 2015 peak reduction goals.

PE

PE's current portfolio consists of nine residential and five commercial EE&C programs[26] designed to save over 434 thousand MWh by the end of 2015.[27]

PE programs continued its moderate performance, with the exceptions of the Quick Home Energy Check-up program, which outperformed its forecast, and the New Construction programs, which underperformed its forecast. Unlike previous years, the Energy Efficient Kits program was not the major source of savings, as PE stopped offering this program in 2013. Lighting is now the largest contributor to residential savings, and its reported savings are in line with expectations.

PE is now in the final stages of verifying its savings from the Conservation Voltage Reduction ("CVR") Program, which initially reported almost 27,000 MWh in savings in 2013. Energy savings may be adjusted upon completion of the evaluation work by Itron.

The portfolio's commercial and industrial ("C&I") programs performed well in 2013. The Small Business and Prescriptive/Existing Buildings programs performed particularly well, each of which exceeded savings by almost 2,000 MWh.

As noted in Table 7, in 2013, PE's EE&C programs achieved 105%, or 141,506 MWh, of its 2013 EE&C electric consumption reduction target. PE's portfolio of programs achieved 92%, or 17.6 MW of its 2013 peak demand reduction target, as noted in Table 8. As of the end of 2013, PE reached 94% and 264% of the 2015 goal for energy savings and demand, respectively.

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
- Retrocommissioning
- Small Business

[26] PE has three programs, not funded through the EmPOWER Maryland surcharge, that contribute energy and demand savings towards the EmPOWER goal, including: conservation voltage reduction, streetlights and high efficient transformers.

[27] The forecasted savings number includes all Commission approved programs and program modifications for the 2012-2014 program cycle.

Table 7. PE EE&C Energy Savings Interim Reported[28] Achievements

	2013 Electric Consumption Reduction (MWh)	Percentage of 2013 Target*	Program-to-Date Electric Consumption Reduction (MWh)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	134,481		415,228	
PE Portfolio of Programs	141,506	105%	390,475	94%

* 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[29]

	2013 Peak Demand Reduction (MW)	Percentage of 2013 Target*	Program-to-Date Peak Demand Reduction (MW)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	19.153		21	
PE Portfolio of Programs	17.602	92%	55.481	264%

* 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.

[28] Reported savings are unverified energy savings and demand reductions based the utilities' quarterly programmatic reports. An independent verification of savings is conducted annually.
[29] PE is the only utility whose Peak Demand Reduction Goals are solely based upon its EE&C Programs. Currently, PE does not have a demand response program.

DPL

DPL's current portfolio consists of eight residential and six non-residential EE&C programs[30] designed to save over 286 thousand MWh by the end of 2015.[31] DPL's plan consists of a traditional set of programs, such as market buy-down or other incentives for the purchase and/or installation of energy efficient products or measures.

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

Retrocommissioning

Small Business

Among the residential programs, DPL's most successful program to date is the Lighting and Appliance program. DPL's Lighting program surpassed its forecasted energy savings projection during 2013 by 19%, or 2,000 MWh. DPL's New Construction program also performed well in 2013 when compared to 2012, with an over 580% increase in participants as well as a 59% increase in energy savings and more than 130% increase in demand savings. DPL requested additional funding for the QHEC program twice in 2013, once for an additional program budget for 2013[32] and again for an additional incentive budget for the remainder of the 2012-2014 budget cycle.[33] These changes had the effect of increasing the 2013 participation target from 3,120 to 5,754. While exceeding its original target, DPL achieved only 74% of this revised budget. Compared to the significant ramp up in 2012, the QHEC program executed 2000 fewer jobs.

The Commercial programs reported much higher energy savings in 2013 when compared to 2012, with an over 150% increase in energy savings and an over 170% increase in demand savings. Among the commercial programs, DPL's most successful program to date is the Prescriptive program. DPL's Prescriptive program performed well in 2013 when compared to 2012, with an 89% increase in energy savings and a 95% increase in demand savings. DPL's Small Business program surpassed its forecasted participants by 580%, or 1,450 participants, its forecasted energy savings by over 290%, or 8,000 MWh, and its forecasted demand savings by over 200%, or 1.2 MW.

As noted in Table 9, in 2013, DPL's EE&C programs achieved 94%, or 67,449 MWh, of its 2013 EE&C electric consumption reduction target. DPL's portfolio of programs, including Demand Response, achieved only 46%, or 19.143 MW of its 2013 peak demand reduction target,

[30] DPL currently has two programs, not funded through the EmPOWER Maryland surcharge, that contribute energy and demand savings towards the EmPOWER goal, including: streetlights and high efficient transformers. DPL is also developing a dynamic pricing and conservation program that will contribute savings in the near term.
[31] The forecasted savings number includes all Commission approved programs and program modifications for the 2012-2014 program cycle.
[32] The Commission approved the requested budget increase of $1,894,562 in Order No. 85701.
[33] The Commission approved the requested incentive budget increase in Order No. 85987.

as noted in Table 10. However, DPL reached 107% and 314% of their 2015 goal for energy savings and demand savings, respectively.

Table 9. DPL EE&C Energy Savings Interim Reported[34] Achievements

	2013 Electric Consumption Reduction (MWh)	Percentage of 2013 Target*	Program-to-Date Electric Consumption Reduction (MWh)***	Percentage of 2015 Goal
EmPOWER Maryland Targets**	71,825		143,453	
DPL Portfolio of Programs	67,449	94%	153,208	107%

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

Table 10. DPL Peak Demand Reduction Interim Reported Achievements[35]

	2013 Peak Demand Reduction (MW)	Percentage of 2013 Target*	Program-to-Date Peak Demand Reduction (MW)***	Percentage of 2015 Goal
EmPOWER Maryland Targets**	41.441		18.000	
DPL Portfolio of Programs	19.143	46%	56.457	314%

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

[34] Reported savings are unverified energy savings and demand reductions based the utilities' quarterly programmatic reports. An independent verification of savings is conducted annually.
[35] Demand Reduction Goals and Achievements include peak demand reduction generated by both EE&C and Demand Response Programs, as both components contribute towards achieving the overall 2011 and 2015 peak reduction goals.

SMECO

SMECO's current portfolio consists of eight residential EE&C programs and three non-residential EE&C programs[36] designed to reduce energy consumption by over 190 thousand MWh by the end of 2015.[37] SMECO's plan consists of a traditional set of programs, such as market buy-down or other incentives for the purchase and/or installation of energy efficient products or measures.

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

Commercial Programs

Custom

Prescriptive

Small Business

SMECO's residential portfolio of programs exceeded the 2013 forecast for energy savings by 2%. Several of SMECO's Residential programs fell short of their participation targets in 2013, while the Lighting program easily exceeded its target. Similar to the participation targets, many of SMECO's programs failed to reach their forecasts for energy savings. SMECO's Residential New Construction program was among the best performing and exceeded the forecasts for energy savings by 239%. This can be attributed to the large number of higher tier homes participating in the program.

The C&I programs exceeded the 2013 forecast for energy savings by 14%. The Prescriptive and Small Business programs accounted for the majority of energy savings, with both programs surpassing forecasted energy savings by 22%, respectively. The Custom program, in contrast, performed much worse in 2013 than in 2012 and fell short of its energy savings forecasts by 21%. Despite exceeding forecasts, SMECO's Prescriptive program suffered a setback in 2013 due to a large number of cancelled or delayed projects. The program is positioned well for 2014 as SMECO predicts a large number of the delayed projects will be completed this year.

As noted in Table 11, in 2013, SMECO's EE&C programs achieved 120%, or 60,019 MWh, of its 2013 EE&C energy reduction target. SMECO's portfolio of programs, including Demand Response, achieved 132%, or 14.716 MW of its 2013 peak demand reduction target, as noted in Table 12. SMECO reached 195% and 53% for their 2015 goal for energy savings and demand savings, respectively.

[36] SMECO currently has one program not funded through EmPOWER Maryland, a conservation voltage reduction pilot, which contributes savings towards the EmPOWER Maryland goals.

[37] The forecasted savings number includes all Commission approved programs and program modifications for the 2012-2014 program cycle.

Table 11. SMECO EE&C Energy Savings Interim Reported[38] Achievements

	2013 Electric Consumption Reduction (MWh)	Percentage of 2013 Target*	Program-to-Date Electric Consumption Reduction (MWh)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	50,112		83,870	
SMECO Portfolio of Programs	60,019	120%	163,727	195%

* 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[39]

	2012 Peak Demand Reduction (MW)	Percentage of 2012 Target*	Program-to-Date Peak Demand Reduction (MW)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	11.144		139	
SMECO Portfolio of Programs	14.716	132%	74	53%

* 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 are unverified energy savings and demand reductions based the utilities' quarterly programmatic reports. An independent verification of savings is conducted annually.
[39] Demand Reduction Goals and Achievements include peak demand reduction generated by both EE&C and Demand Response Programs, as both components contribute towards achieving the overall 2011 and 2015 peak reduction goals.

Low-Income Programs

On December 22, 2011, the Commission designated the Maryland Department of Housing and Community Development ("DHCD"), in Order No. 84569, 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 programs. 2013 marked the first full year in which DHCD had full control of the limited income program. Participation in the program by low income consumers continued to lag behind forecasts in 2013 achieving only 89% of forecast.[40] Despite the lower than expected participation numbers, DHCD exceeded the forecasted energy savings by 282% and averaging annual energy savings of over 5,000 MWh per participant.[41]

Demand Response

The EmPOWER Maryland Act requires the five utilities to implement cost-effective demand response programs designed to achieve a reduction in their 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 in instances of system reliability or high electricity prices during critical peak hours. The Commission approved four residential Demand Response programs in early 2008 (BGE's DR program was approved in November of 2007),[42] all of which were operational by the end of 2009.[43]

Each DR program includes these common components: (1) all DR programs are 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) customers can choose one of three cycling choices (50%, 75%, and 100%[44]), except for SMECO. SMECO uses an initial 2 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. Utilities will invoke the cycling process when PJM calls for an emergency event or a utility's determined event during summer peak season. The incentives vary among utilities.

Table 13 summarizes the utilities incentives to the program participants.

[40] 63% of the participation were in BGE's territory.
[41] The energy savings have not been verified by Itron.
[42] Commission Letter Order dated November 30, 2007.
[43] 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.
[44] The cycling choices of 50%, 75%, and 100% represents the air conditioner compressor working cycle reduced by 50%, 75%, and 100% under PJM- or utility-invoked emergency events during summer peak season.

Table 13. Utilities Incentive to 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 SMECO CoolSentry program can keep the installed thermostat for free after 12 months of the installation; otherwise, the thermostat will be removed if the participant terminates participation less than 12 months.

Table 14 summarizes the installation progress of these devices for each utility direct load control ("DLC") program in 2013 and program-to-date through December 31, 2013. The main concern about the utilities being able to reach their demand reduction goals is market saturation. SMECO has reached 50% of the eligible customers, and BGE has installed devices in 38% of its service territory's eligible homes (those with central air conditioning).

Table 14. Utilities Residential Direct Load Program Installation (devices)

Utility	2013	Program-to-Date	Percent of Eligible Customers Participating*
BGE	7,880	365,172	38%
Pepco	31,408	144,569	53%
DPL	8,446	34,277	37%
SMECO	2,115	40,065	50%
Total	49,849	584,083	45%

* Eligible Customer's have a central air conditioner or heat pump

Table 15 summarizes the DLC program performance for 2013 and program-to-date. The total coincident peak demand reduction reported in 2013 was -40.080 MW. The primary reason for this shortfall is attributed to BGE conducting a PJM required operability study, which resulted in a 69 MW reduction in peak load.[45] Additionally, several of the DLC programs are approaching expected levels of customer participation. Program-to-date, the four utilities have achieved 696.521 MW of demand reduction, and achieved 79% of coincident peak demand reductions for the 2012-2014 EmPOWER Maryland target. Additional progress in the DR programs is expected to stem from smart grid enabled dynamic pricing programs to achieve the 2015 peak demand reduction goals.

[45] PJM requires an operability study every five years in order to determine if the amount of MW reduction a utility claims its program is providing is accurate.

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

Utility	2013 Peak Demand Target	2013 Reported	Percent of 2013 Target	Program-to-Date Reported	2012-2014 EmPOWER Maryland Target	Percent of 2012-2014 Target
BGE	-92.200	-82.873	90%	462.392	508.700	91%
PEPCO	58.766	29.971	51%	151.492	262.865	58%
DPL	27.611	7.622	28%	32.727	90.430	36%
SMECO	3.900	5.200	133%	49.910	14.800	337%
Total	**-1.723**	**-40.080**	**23%**	**696.521**	**876.795**	**79%**

PJM RPM Capacity Market

The DLC programs resulted in a combined 554 MW bid into the PJM Reliability Pricing Model ("RPM") auction for Delivery Year ("DY") 2016-2017, an 11% decrease from 2012 PJM bid of 625 MW for DY 2015-2016. The utilities collectively have lowered their bids into the PJM capacity market as the DLC programs have approached market saturation levels. To date, these programs have accounted for 4,985 MW of the total capacity bid into the PJM capacity market. Table 16 summarizes the capacity bid into PJM's capacity market from the DLC programs by delivery year.

Table 16. Demand Response Program RPM Bid 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	Total
217	415	662	953	803	756	625	554	4,985

Table 17 illustrates the amount of capacity cleared in the May 2012 and May 2013 RPM Capacity market for the delivery years of 2015/2016 and 2016/2017, respectively. The table also shows the amount of capacity revenue the utilities can expect to receive from PJM in the two delivery years that will be used to offset the costs of the Demand Response, EE&C and Dynamic Pricing ("DP") borne by ratepayers. The amount of capacity cleared in the 2016/2017 DY auction is 26 MW more than the amount of capacity cleared in 2015/2016 DY, due to the higher amount of capacity cleared for EE&C and DP. However, the expected revenue from PJM in the 2016/2017 DY is $15.3 million lower than the DY 2015/2016. PJM noted the 2016/2017 capacity prices were lower than the previous delivery year due to a net increase in supply from new entries and imports combined with a very slight increase in demand. The amount of cleared capacity in the 2016/2017 BRA only increased 2.8% over the 2015/2016 BRA[46] - a sharp decline from the 9.7% increase in cleared capacity from the 2014/2015 BRA to the 2015/2016 BRA.[47] Another factor in declining prices was a decrease in the pressure from pending retirements. Since the end of the previous BRA, only 2,710 MW of generation submitted deactivation notices.[48] This is significantly less than the requests submitted prior to the 2015/2016 BRA. In addition, 1,346 MW of capacity withdrew their deactivation requests, offsetting much of the new deactivation requests.[49]

[46] *2016/2017 RPM Base Residual Auction Results*, PJM 2 (May 24, 2013), http://www.pjm.com/~/media/markets-ops/rpm/rpm-auction-info/2016-2017-base-residual-auction-report.ashx.
[47] *Id.*
[48] *Id.*
[49] *Id.*

Table 17. PJM RPM Bid Results and Expected Revenue for Delivery Year 2015/2016[50] and 2014/2015

	DY 2015-2016					DY 2016-2017				
	Cleared Bids (MW)				Expected Revenue	Cleared Bids (MW)				Expected Revenue
	DR	DP	EE&C	Total	($Million)	DR	DP	EE&C	Total	($Million)
Total	625	415	167	1,207	$69.01	554	461	218	1,233	$53.73

EmPower Maryland Funding Levels

EE&C Program Funding

The Commission approved a three-year budget for each utilities' EmPOWER Maryland proposal. Table 18 breaks down the approved budgets for 2013 for each utility. Table 19 illustrates what each utility actually spent in 2013 on their EmPOWER Maryland programs.

Table 18. Forecasted 2013 EE&C Budgets from EmPOWER Filings

	Residential	Commercial	Total
BGE	$ 43,603,886	$ 49,921,467	$ 93,525,352
Pepco	$ 24,849,283	$ 28,911,790	$ 53,761,073
PE	$ 12,164,720	$ 7,854,877	$ 20,019,957
DPL	$ 8,218,377	$ 6,600,275	$ 14,818,651
SMECO	$ 7,117,022	$ 3,956,395	$ 11,073,417
Total	$ 95,953,288	$ 97,244,804	$ 193,198,092

Table 19. Reported 2013 EE&C Spending

	Residential	Commercial	DHCD Limited Income Program	Total
BGE	$ 44,055,431	$ 46,915,828	$ 10,547,184	$ 101,518,443
Pepco	$ 26,442,582	$ 37,529,660	$ 3,401,782	$ 67,374,024
PE	$ 14,439,279	$ 5,172,121	$ 1,962,035	$ 21,573,435
DPL	$ 5,902,968	$ 10,171,170	$ 2,672,421	$ 18,746,559
SMECO	$ 6,750,793	$ 2,110,420	$ 1,302,443	$ 10,163,657
Total	$ 97,591,053	$ 101,899,199	$ 19,885,865	$ 219,376,117

Table 20 details the various EmPOWER Maryland surcharges and revenue requirements for each EmPOWER utility. The revenue requirements do not match the filed budgets because program costs are collected over a five-year period as directed by the Commission in Order No. 81637 in Case No. 9111.[51]

[50] There was a recording error for the cleared capacity for EE&C for the 2015/2016 delivery year in the prior report. It under-reported the cleared capacity for EE&C by 42 MW, and the expected revenue in 2015/2016 by $2.5 million.

[51] *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.

Table 20. 2013 EE&C Surcharges and Revenue Requirements[52]

	Residential	Large C&I	Small C&I	Revenue Requirement[53]
BGE	$0.00200	$0.00162	$0.00380	$53,115,860
Pepco	$0.00175	$0.00099	$0.00099	$15,967,951
PE	$0.00244	$0.00065	$0.00065	$10,106,199
DPL	$0.00156	$0.00107	$0.00107	$5,487,027
SMECO	$0.00317	$0.00140	$0.00140	$8,929,646

Demand Response Funding

BGE, DPL, Pepco, and SMECO operated their respective DR programs in 2013. Table 21 details the surcharges and revenue requirements of each utility with an approved DR project.[54]

Table 21. 2013 Demand Response Surcharges and Revenue Requirements[55]

	Residential Surcharge	C&I Surcharge	Revenue Requirement
BGE	$0.00075	N/A	$12,647,152
Pepco	$0.00007	$0.00028	$2,904,949
DPL	$0.00115	N/A	$6,200,815
SMECO	$0.00230	$0.00230	$8,254,241

Table 22 details the respective forecasted and reported budgets for each of the EmPOWER utilities with an operational DR program. All utilities' programs were under budget for the 2013 program year due to the programs falling short of installation forecasts, which resulted in lower than forecasted spending on equipment, installation and incentive payments.

Table 22. Demand Response Forecasted and Reported Budgets

	Forecasted Budget	Reported Costs	Variance
BGE	$ 40,803,814	$ 35,834,370	$ (4,969,444)
Pepco	$ 32,261,255	$ 23,048,511	$ (9,212,744)
DPL	$ 9,276,549	$ 5,773,135	$ (3,503,414)
SMECO	$ 7,643,748	$ 7,406,622	$ (237,126)
Total	$ 89,985,366	$ 72,062,638	$ (17,911,728)

[52] All surcharges are per kWh.
[53] Revenue Requirements are a combination of residential revenue requirements and C&I revenue requirements.

[54] PE did not have DR program in effect in 2013 and therefore did not file for a surcharge recovery.
[55] All surcharges are per kWh.

Evaluation, Measurement & Verification

Determining and validating electricity savings and related impacts is a critical component of such programs, particularly when evaluating how effective program delivery has been, what factors are driving or impeding customer participation in programs, characteristics of participants and non-participating customers, determinants of equipment decisions, and customer satisfaction with program delivery. Moreover, the design and depth of program data collection, monitoring, and analyses can set the tone in terms of the significance in 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 Evaluation, Measurement & Verification ("EM&V") best practices, the Commission adopted a third-party, independent evaluator model.[56] In this model, each utility will direct its own primary evaluation and verification activities through its EM&V Contractor, with an independent evaluator providing independent analysis and due diligence of the EM&V process, and evaluation of broad policy issues, such as impacts on the environment, jobs, price mitigation, reliability, etc., as necessary, for the Commission. To implement the approved model, in January 2010, the utilities and PSC Staff issued a Request for Proposal ("RFP") to select a PSC EM&V Independent Evaluator.[57] Kick-off activities commenced in April 2010 with both the utilities' EM&V contractor (Navigant Consulting) and the Commission's Independent Evaluator (Itron), which have continued in their respective capacities through 2013.

Overall Findings of the 2012 EmPOWER EE&C Program

Energy and Peak Demand Savings

In 2012, Navigant's evaluation of the first year savings was 709,451 MWh and 112,987 MW, which was 115% of the utilities' reported energy and demand savings. Itron's verification analysis confirmed 99.9% of the evaluated energy and demand savings estimates. Except for the Residential Retrofits Program, verified savings are equal to the evaluated savings for all of the EmPOWER programs. This is a very important result and should provide increased confidence to consumers and stakeholders in Maryland that the evaluated savings from the EmPOWER programs are real and credible.

Given 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 utilities' reported savings estimates for 2013 should continue to be very similar to the evaluation results.

[56] *See* Commission Order Number 82869 issued on August 31, 2009 in Case Nos. 9153 – 9157.
[57] The utilities also issued an RFP for a Statewide EM&V Evaluator for their primary EM&V work for the EE&C programs only. Their Demand Response Programs will be evaluated either in-house or in conjunction with their program contractors.

Cost Effectiveness

Table 23 presents the 2012 cost-effectiveness results per utility and by sector.

Table 23. 2012 Portfolio Benefit – Cost Results

	Residential	Commercial	Portfolio
BGE	1.62	2.25	1.90
Pepco	1.79	2.84	2.27
PE	1.23	0.91	1.16
DPL	1.46	1.48	1.47
SMECO	1.71	1.21	1.58
Statewide	1.61	2.27	1.88

EmPOWER programs in 2012 generally saw significant improvements in cost-effectiveness compared to 2011.[58] All of the utilities' residential and commercial sector portfolios were cost-effective, with the exception of PE's commercial sector, which was likely attributable to PE having lower overall avoided costs, not claiming price mitigation benefits and transitioning to an outside vendor. There are several factors that lead to the improved cost-effectiveness for 2012 compared to 2011.

- Despite continued downward pressure on avoided cost, energy savings in 2012 were 36% higher than in 2011, which help improve cost-effectiveness.

- Additional benefits were accounted for in the 2012 cost-effectiveness analysis, including capacity price mitigation benefits, transmission and distribution benefits, heating oil savings and propane savings.

Advanced Metering Infrastructure Programs

AMI or "Smart Grid" technology is generally defined as a two-way communication system and associated equipment and software, including metering equipment installed on an electric customer's premise, that uses the electric company's distribution network to provide real-time monitoring, diagnostic, and control information and services. 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 has approved Smart Grid Initiatives ("SGI") 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, 2013, there have been approximately 1.6 million electric and gas meters installed across the State. BGE has installed over 867,000 electric meters and gas

[58] Potomac Edison was the only utility to see a decrease in cost-effectiveness from 2010 to 2011. This is due in large part to no longer offering energy efficiency kits, a very cost-effective program, due to market saturation.

modules, or approximately 44% of the total planned installations. Pepco has installed over 552,000 meters, approximately 99% of the total planned installations. DPL has installed over 175,900 meters, approximately 83% of the total planned installations. All three utilities plan on completing meter installations by the end of 2014, while SMECO will begin its deployment of meters in the third quarter of 2014.

Opt-Out

On February 29, 2012, the Commission issued a hearing notice on the potential for an "opt-out" provision for advanced metering infrastructure ("AMI"). A public hearing was held on May 22, 2012, in which more than 80 parties expressed their opinion on the merits and problems with allowing utility customers the choice to opt-out of receiving a smart meter as part of the SGIs. On May 24, 2012, the Commission issued Order No. 84926, which allowed utility customers to opt-out of smart meter installations until the Commission issues its decision regarding costs and allocation. Subsequent orders were issued on January 7, 2013 and January 13, 2013, which required the utilities to submit to the Commission proposals regarding the overall additional costs associated with allowing customers to retain their current meter, how to recover the additional costs and proposals for recovery of cost related to offering customers different RF-free or RF-minimizing options.

On April 24, 2013, Pepco, DPL and SMECO submitted their opt-out cost proposals to the Commission. BGE submitted its proposal on April 25, 2013. On July 31, 2013, the Commission received comments on the utilities opt-out proposals from Staff, the Office of People's Counsel, the Maryland Energy Administration and Maryland Smart Meter Awareness group. A legislative style hearing was held on August 6, 2013 and the Commission heard presentations and testimony from the engaged parties. The Commission requested Staff provide additional cost details from the Companies' proposals and additional information about other states' decisions regarding opt-outs and associated fees, if any. Staff provided this information in a supplemental filing on September 10, 2013. On February 26, 2014, the Commission issued Order No. 86200, establishing appropriate and reasonable fees for customers who choose to opt-out of having a smart meter installed on their premise.

2013 per Capita Energy Consumption and Peak Demand

Tables 24, 25, and 26 present the per capita electricity consumption and the peak demand for all utilities in 2007, which provides the baseline in which the EmPOWER Maryland per capita reduction goals are based. Additionally, the tables include the EmPOWER Maryland per capita goals of a 10% reduction in peak demand in 2013 and the 10% per capita reduction in energy use and the 15% per capita reduction of peak demand in 2015. The final column in each table calculates the amount of energy use reduction and peak demand reduction necessary to achieve the applicable 2013 and 2015 per capita reduction targets. These numbers are based on energy use and demand forecasts from the 2011 PJM load forecast and population projections based on the 2010 census population data.

Table 24. Ten Percent Reduction per Capita Peak Demand

EmPower Maryland - 10 Percent Reduction in Maryland Peak Demand 2013								
2007 Utility Company Data Request Information								
Maryland Utility	2007 Peak Demand Weather Normalized (1)	2007 Estimated Population (2)	2013 Estimated Population (2)	2007 per Capita Peak Demand MW	10 Percent Reduction per Capita Peak Demand MW	Peak Demand Goal 2013 MW	PJM Derived Peak Demand Forecast 2013 MW (3)	Difference Between Goal and PJM Derived Forecast MW
BGE	7,260.000	2,618,715	2,722,909	0.0028	0.0025	**6,794**	**7,590**	**796**
Pepco	3,471.000	1,772,292	1,873,607	0.0020	0.0018	**3,302**	**3,749**	**447**
PE	1,418.000	422,227	456,650	0.0034	0.0030	**1,380**	**1,323**	**-57**
Delmarva	1,068.000	337,934	361,998	0.0032	0.0028	**1,030**	**987**	**-43**
SMECO	748.700	328,537	359,185	0.0023	0.0021	**737**	**842**	**105**
Choptank	250.134	79,147	82,686	0.0032	0.0028	**235**	**225**	**-10**
Hagerstown	73.992	39,544	40,508	0.0019	0.0017	**68**	**74**	**5**
Easton	64.820	14,289	17,453	0.0045	0.0041	**71**	**66**	**-6**
Thurmont	16.600	6,057	6,337	0.0027	0.0025	**15.6**	**20**	**4.8**
Berlin	9.143	3,957	4,800	0.0023	0.0021	**10.0**	**11**	**1.1**
Williamsport	4.086	2,282	2,225	0.0018	0.0016	**3.6**	**4**	**0.9**
Somerset	2.055	1,844	1,859	0.0011	0.0010	**1.9**	**2**	**0.2**
A&N Coop	0.810	386	386	0.0021	0.0019	**0.7**	**1**	**0.1**
						13,649	**14,895**	**1,245.2**

(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).
2013 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 25. 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	33,112,453.000	5.69%	35,109,765.179	2,618,715	2,778,350	13.41	12.07	**33,525,028**	**37,118,778**	**3,593,750**
Pepco	15,651,105.000	5.25%	16,518,897.197	1,772,292	1,894,550	9.32	8.39	**15,892,578**	**17,131,686**	**1,239,108**
PE	7,045,209.000	9.63%	7,795,557.000	422,227	466,292	18.46	16.62	**7,748,215**	**8,133,924**	**385,708**
Delmarva	4,410,698.000	5.83%	4,683,581.501	341,860	364,624	13.70	12.33	**4,495,919**	**4,661,025**	**165,106**
SMECO	3,464,094.089	5.99%	3,684,886.957	328,537	371,750	11.22	10.09	**3,752,609**	**3,836,480**	**83,870**
Choptank	957,285.184	7.11%	1,030,555.787	75,221	87,232	13.70	12.33	**1,075,589**	**1,099,423**	**23,834**
Hagerstown	355,623.286	3.56%	368,768.622	39,544	41,110	9.33	8.39	**345,038**	**393,169**	**48,131**
Easton	274,391.948	5.18%	289,372.727	14,289	18,537	20.25	18.23	**337,855**	**300,271**	**-37,585**
Thurmont	86,870.000	4.92%	91,364.052	6,057	6,451	15.08	13.58	**87,570**	**95,784**	**8,213.7**
Berlin	40,259.553	7.94%	43,731.967	3,957	5,021	11.05	9.95	**49,946**	**47,574**	**-2,371.3**
Williamsport	20,083.000	7.79%	21,780.261	2,282	2,286	9.54	8.59	**19,634**	**21,475**	**1,841.4**
Somerset	7,343.019	5.67%	7,783.989	1,844	1,861	4.22	3.80	**7,072**	**8,868**	**1,796.6**
A&N Coop	3,342.600	6.43%	3,572.147	386	386	9.25	8.33	**3,215**	**3,785**	**569.7**
								67,340,269	**72,852,242**	**5,511,973.0**

(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 26. 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	466,292	0.0034	0.0029	**1,331**	**1,347**	**16**
Delmarva	1,068.000	337,934	367,836	0.0032	0.0027	**988**	**1,011**	**23**
SMECO	748.700	328,537	371,750	0.0023	0.0019	**720**	**859**	**139**
Choptank	250.134	79,147	84,020	0.0032	0.0027	**226**	**230**	**4**
Hagerstown	73.992	39,544	41,110	0.0019	0.0016	**65**	**75**	**10**
Easton	64.820	14,289	18,537	0.0045	0.0039	**71**	**67**	**-5**
Thurmont	16.600	6,057	6,451	0.0027	0.0023	**15.0**	**21**	**5.7**
Berlin	9.143	3,957	5,021	0.0023	0.0020	**9.9**	**11**	**1.4**
Williamsport	4.086	2,282	2,286	0.0018	0.0015	**3.5**	**5**	**1.1**
Somerset	2.055	1,844	1,861	0.0011	0.0009	**1.8**	**2**	**0.3**
A&N Coop	0.810	386	386	0.0021	0.0018	**0.7**	**1**	**0.2**
						13,134	**15,269**	**2,135.0**

(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 27 presents the per capita electricity consumption for all utilities in 2013, and compares the reported 2013 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. It is important to note that electricity sales are not weather normalized, and therefore, will fluctuate depending upon the weather. Other variables, such as the economic activity and energy prices, may also influence electricity sales which may make it difficult to calculate energy savings attributable to EmPOWER Maryland. The Act measures success based on a per capita basis of the 2007 energy use baseline. BGE's 2013 per capita results provide a perfect example of the disconnect between EmPOWER program achievement and the EmPOWER per capita goal achievement. In 2013, the Commission calculated BGE's per capita energy use at 12.06 MWh, which is 10% reduction of the 2007 per capita energy use. In other words, based on 2013 energy sales and population, BGE has already achieved the 10% reduction goal in per capita energy use. However, BGE's reported energy savings program to date are only 51% of the 2015 overall energy reduction goal. The disconnect between these two numbers is that the weather in 2013 was relatively mild compared to the weather in 2007 (which was actually slightly warmer than normal), so a mild year compared to a warmer than average year can lead to per capita goal attainment despite the actual program energy savings well below the 2015 goal.

Tables 28 and 29 presents the per capita peak demand for all utilities in 2013, and compares the reported 2013 per capita values to the 2007 per capita baseline values to gauge the progress that has been made towards achieving the 2013 and 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 similar disconnect between utilities achieving the per capita peak demand reductions and the peak reductions achieved through the EmPOWER Maryland programs. For example, BGE has a per capita peak demand that is 14.2% lower than the 2007 baseline, or 98% of the 15% EmPOWER peak demand reduction goal. However, as of the end of 2013, BGE has only reached 59% of the overall MW reduction goal through 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[59] and 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 close to achieving the per capita peak demand reduction goal but only 59% of the MW reduction goal.

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

Table 27. 2013 Per Capita Energy Use Compared to 2015 EmPOWER Maryland Goal

EmPower Maryland - 10 Percent Reduction in Maryland Energy Sales 2015													
2013 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)	2013 Energy Sales Gross-Up by Loss Factor MWh	2013 Estimated Population (2)	2013 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 2013 Use and 2015 Goal MWh	2015 Energy Reduction Goal MWh	Utility Reported Savings Program-to-Date
BGE	13.41	12.07	1.34	32,818,450	2,721,248	12.06	10.0%	100.5%		33,525,028	-706,578	3,593,750	1,816,124
Pepco	9.32	8.39	0.93	15,470,018	1,909,148	8.10	13.1%	130.6%		15,892,578	-422,560	1,239,108	806,041
PE	18.46	16.62	1.85	7,856,178	448,181	17.53	5.1%	50.6%		7,748,215	107,963	385,708	390,475
Delmarva	13.70	12.33	1.37	4,489,579	356,287	12.60	8.0%	80.2%		4,495,919	-6,340	165,106	153,208
SMECO	11.22	10.09	1.12	3,712,582	353,774	10.49	6.4%	64.4%		3,752,609	-40,027	83,870	163,727
Choptank	13.70	12.33	1.37	1,012,679	78,396	12.92	5.7%	57.1%		1,075,589	-62,910	23,834	
Hagerstown	9.33	8.39	0.93	309,838	40,203	7.71	17.4%	173.6%		345,038	-35,200	48,131	
Easton	20.25	18.23	2.03	272,896	16,520	16.52	18.4%	184.3%		337,855	-64,959	-37,585	
Thurmont	15.08	13.58	1.51	83,241	6,274	13.27	12.0%	120.4%		87,570	-4,329	8,214	
Berlin	11.05	9.95	1.11	44,894	4,792	9.37	15.2%	152.4%		49,946	-5,051	-2,371	
Williamsport	9.54	8.59	0.95	21,098	2,137	9.87	-3.4%	-34.3%		19,634	1,464	1,841	
Somerset	4.22	3.80	0.42		1,149	0.00	100.0%	1000.0%		7,072	-7,072	1,797	
A&N Coop	9.25	8.33	0.93	2,982	276	10.81	-16.8%	-167.7%		3,215	-233	570	
Total	**12.38**	**11.14**	**1.24**	**66,094,439**	**5,938,383**	**11.13**	**10.1%**	**100.8%**		**67,349,340**	**-1,254,901**	**6,615,496**	**3,329,575**

(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 2013 per Capita Energy Use is from the 2007 per Capita Energy use Column. For example, BGE's 2013 per Capita Energy use is 10.05% 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 2013 BGE's per capita energy use was 10.0% lower than the 2007 per capita energy use baseline. In other words, in 2013, BGE achieved 10.0% of the 10% EmPower Maryland goal, which is equivalent to reaching 100.5% of the 2015 per capita energy reduction target.

Table 28. 2013 Per Capita Peak Demand Compared to 2013 EmPOWER Maryland Goal

EmPower Maryland - 10 Percent Reduction in Maryland Peak Demand 2013													
2013 Utility Company Data Request Information													
Maryland Utility	2007 per Capita Peak Demand MW	2013 per Capita Peak Demand Goal MW	2013 per Capita Demand Reduction Target MW (1)	2013 Peak Demand Weather Normalized	2013 Estimated Population (2)	2013 per Capita Peak Demand MW	Percentage Reduced from 2007 Baseline (3)	Percentage of Per Capita Peak Demand Savings Achieved Towards 2013 Reduction Target (4)		2013 Peak Demand Goal MW	Difference Between 2013 Use and 2013 Goal	2013 Peak Demand Reduction Goal	Utility Reported Savings Program-to-Date
BGE	0.0028	0.0025	0.0003	6,471	2,721,248	0.0024	14.2%	142.2%		6,794	-323	796	749
Pepco	0.0020	0.0018	0.0002	2,953	1,909,148	0.0015	21.0%	210.3%		3,302	-349	447	603
PE	0.0034	0.0030	0.0003	1,389	448,181	0.0031	7.7%	77.1%		1,380	9	-57	55
Delmarva	0.0032	0.0028	0.0003	970	352,195	0.0028	12.9%	128.9%		1,030	-60	-43	56
SMECO[5]	0.0023	0.0021	0.0002	762	353,774	0.0022	5.5%	55.1%		737	25	105	74
Choptank	0.0032	0.0028	0.0003	261	82,487	0.0032	-0.3%	-2.9%		235	26	-10	
Hagerstown[5]	0.0019	0.0017	0.0002	62	40,203	0.0015	17.2%	171.6%		68	-6	5	
Easton[5]	0.0045	0.0041	0.0005	63	16,520	0.0038	15.4%	154.0%		71	-8	-6	
Thurmont[5]	0.0027	0.0025	0.0003	15	6,274	0.0024	13.0%	130.1%		15.6	-1	5	
Berlin[3]	0.0023	0.0021	0.0002	10	4,792	0.0021	9.4%	94.1%		10.0	0	1	
Williamsport[5]	0.0018	0.0016	0.0002	4	2,137	0.0019	-6.3%	-63.3%		3.6	0	1	
Somerset[5]	0.0011	0.0010	0.0001		1,149	0.0000	100.0%	1000.0%		1.9	-2	0	
A&N Coop[5]	0.0021	0.0019	0.0002		276	N/A	N/A	N/A		0.7	0	0	
Total	**0.0026**	0.0023	**0.0003**	**12,960.599**	**5,938,383**	**0.0022**	**14.6%**	146.4%		**13,649**	**-688**	**1,244**	**1,538**

(1) The 2013 per Capita Peak Demand Reduction Target Column is the difference between the 2007 per Capita Peak Demand and 2013 per Capita Peak Demand Goal. For example, for BGE to reach its 2013 per capita Peak Demand goal of 0.0025 MW, BGE would have to achieve a reduction of 0.0003 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 2013 per Capita Peak Demand is from the 2007 per Capita Peak Demand Column. For exmple, BGE's 2013 per Capita Peak Demand is 14.2% lower than BGE's 2007 per Capita Peak Demand.

(4) Percentage of Per Capita Peak Demand Savings Towards 2013 Reduction Target Column, calculates the Percentage Reduced from 2007 Baseline as a percentage of the 10% EmPower Maryland goal. For example, in 2013 BGE's per capita peak demand was 14.2% lower than the 2007 per capita peak demand baseline. In other words, in 2013, BGE achieved 14.2% of the 10% EmPower Maryland goal, which is equivalent to reaching 142.2% of the 2013 per capita peak demand target.

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

Table 29. 2013 Per Capita Peak Demand Compared to 2015 EmPOWER Maryland Goal

EmPower Maryland - 15 Percent Reduction in Maryland Peak Demand 2015													
2013 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)	2013 Peak Demand Weather Normalized	2013 Estimated Population (2)	2013 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 2013 Use and 2015 Goal	2015 Peak Demand Reduction Goal	Utility Reported Savings Program-to-Date
BGE	0.0028	0.0024	0.0004	6,471	2,721,248	0.0024	14.2%	94.8%		6,547	-76	1,267	749
Pepco	0.0020	0.0017	0.0003	2,953	1,909,148	0.0015	21.0%	140.2%		3,154	-201	672	603
PE	0.0034	0.0029	0.0005	1,389	448,181	0.0031	7.7%	51.4%		1,331	58	16	55
Delmarva	0.0032	0.0027	0.0005	970	352,195	0.0028	12.9%	86.0%		988	-19	23	56
SMECO[5]	0.0023	0.0019	0.0003	762	353,774	0.0022	5.5%	36.8%		720	42	139	74
Choptank	0.0032	0.0027	0.0005	261	82,487	0.0032	-0.3%	-1.9%		226	36	4	
Hagerstown[5]	0.0019	0.0016	0.0003	62	40,203	0.0015	17.2%	114.4%		65	-3	10	
Easton[5]	0.0045	0.0039	0.0007	63	16,520	0.0038	15.4%	102.7%		71	-8	-5	
Thurmont[5]	0.0027	0.0023	0.0004	15	6,274	0.0024	13.0%	86.8%		15.0	0	6	
Berlin[3]	0.0023	0.0020	0.0003	10	4,792	0.0021	9.4%	62.8%		9.9	0	1	
Williamsport[5]	0.0018	0.0015	0.0003	4	2,137	0.0019	-6.3%	-42.2%		3.5	1	1	
Somerset[5]	0.0011	0.0009	0.0002		1,149	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**	**12,960.599**	**5,938,383**	**0.0022**	**14.6%**	**97.6%**		**13,134**	**-173**	**2,135**	**1,538**

(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 2013 per Capita Peak Demand is from the 2007 per Capita Peak Demand Column. For exmple, BGE's 2013 per Capita Peak Demand is 14.2% 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 2013 BGE's per capita peak demand was 14.2 lower than the 2007 per capita peak demand baseline. In other words, in 2013, BGE achieved 14.2% of the 15% EmPower Maryland goal, which is equivalent to reaching94.8% of the 2015 per capita peak demand target.

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

Tables 30 and 31 compare the 2007 per capita energy use and peak demand with that of 2008, 2009, 2010, 2011, 2012 and 2013. A majority of the State's electric utilities experienced a decrease in per capita energy use and per capita peak demand compared to 2012 levels. This decrease could be attributable to generally more moderate weather in the summer and winter compared to 2012. Also, 2013 marked the third year in which all utilities with approved EmPOWER Maryland programs were operating programs for the full year.

Table 30. 2007-2013 per Capita Energy Consumption

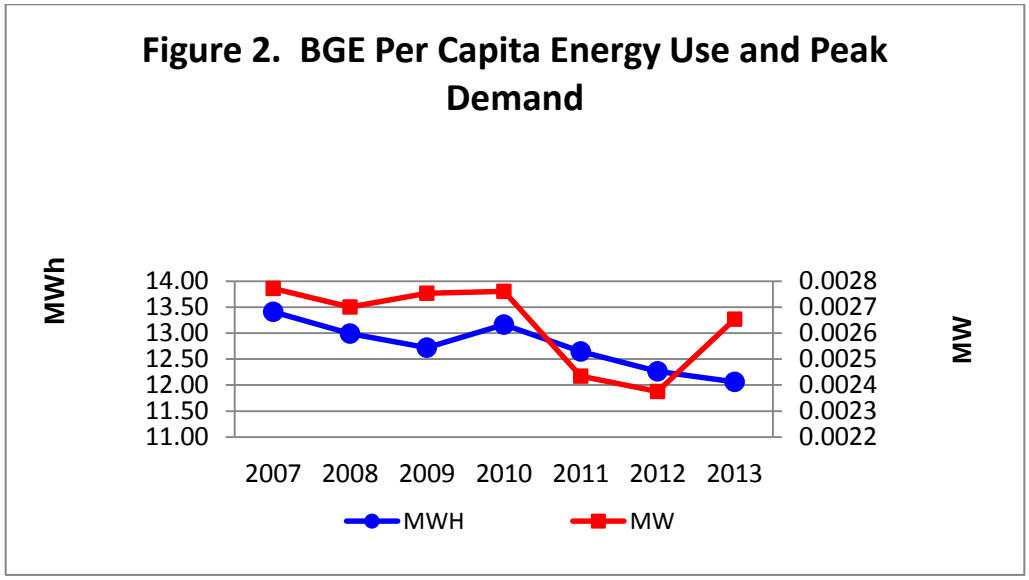
Maryland Utility	Per Capita Energy Use MWh						
	2007	2008	2009	2010	2011	2012	2013
BGE	13.41	12.99	12.72	13.17	12.65	12.26	12.06
Pepco	9.32	9.05	8.81	8.97	8.91	8.18	8.10
PE	18.46	19.49	18.86	19.39	17.17	16.93	17.53
Delmarva	13.70	12.60	12.83	13.14	13.02	12.61	12.60
SMECO	11.22	10.57	10.47	10.83	10.85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

Table 31. 2007-2013 per Capita Peak Demand

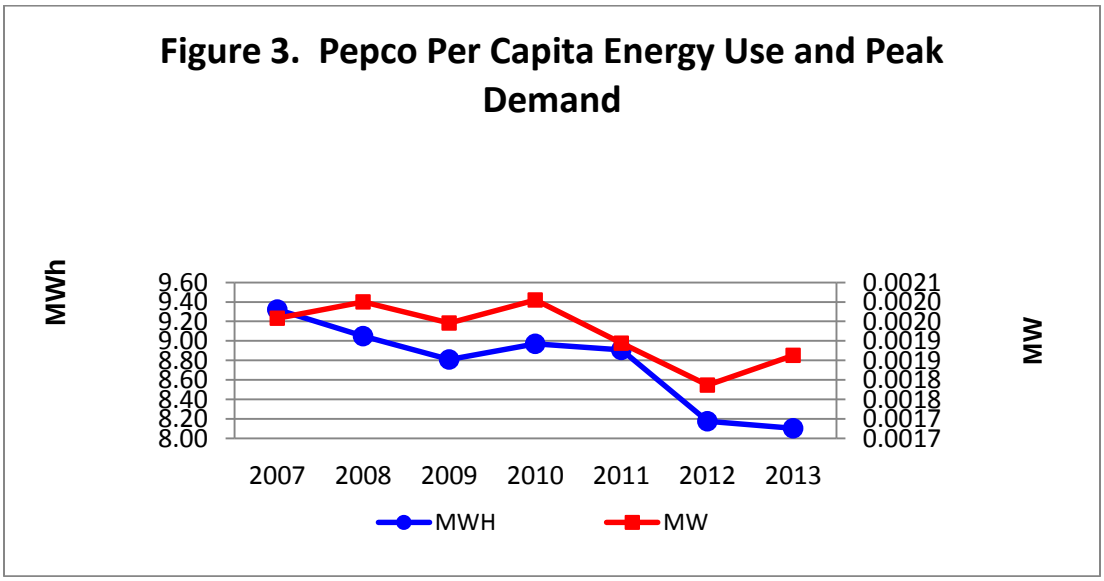
Maryland Utility	Per Capita Peak Demand MW						
	2007	2008	2009	2010	2011	2012	2013
BGE	0.0028	0.0027	0.0028	0.0028	0.0024	0.0024	0.0027
Pepco	0.0020	0.0020	0.0019	0.0020	0.0019	0.0018	0.0019
PE	0.0034	0.0034	0.0030	0.0029	0.0032	0.0033	0.0032
Delmarva	0.0032	0.0028	0.0028	0.0028	0.0025	0.0028	0.0029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

The following five charts provide a graphical representation of Table 30, for the five EmPOWER Maryland Utilities. As discussed earlier in this report, the graphs will illustrate how the per capita energy savings value is effected by the weather, as evidenced by a spike in per

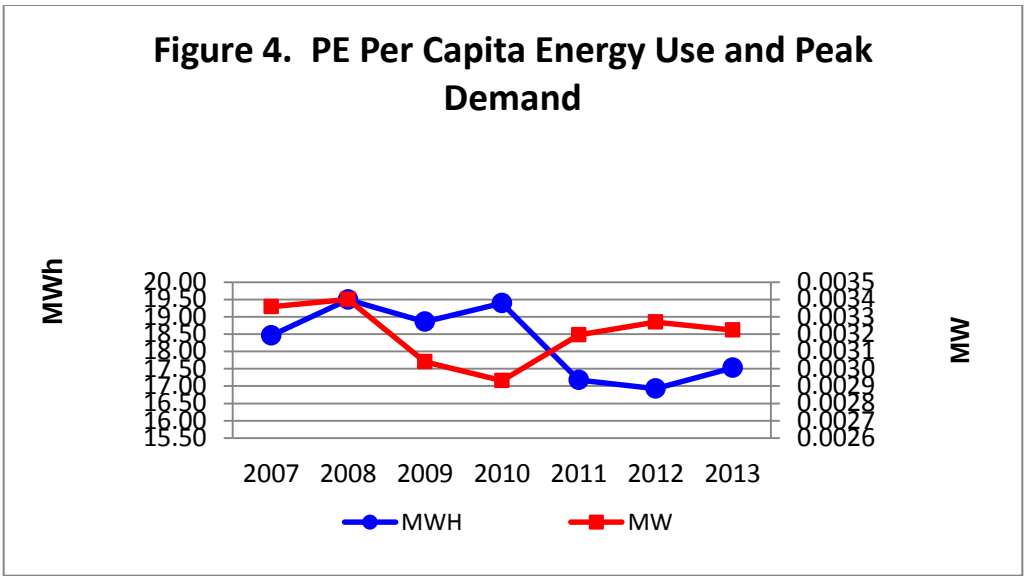
capita energy use in 2010 for each utility experiencing a warmer than normal summer and a cooler than normal winter.



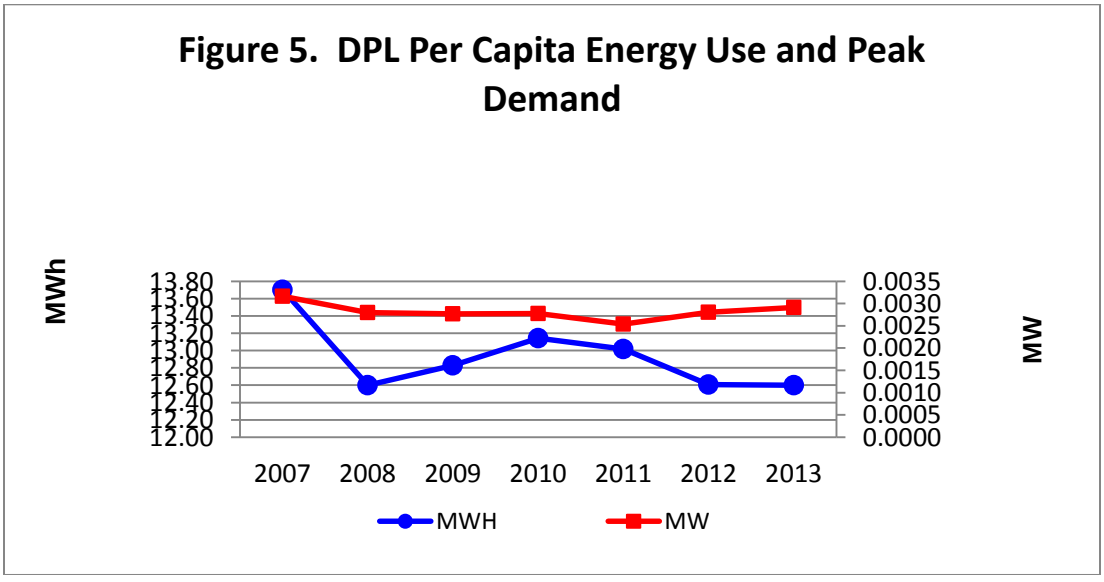
BGE's per capita goal for energy use is 12.07 MWh
BGE's per capita goal for peak demand reduction is 0.0024 MW



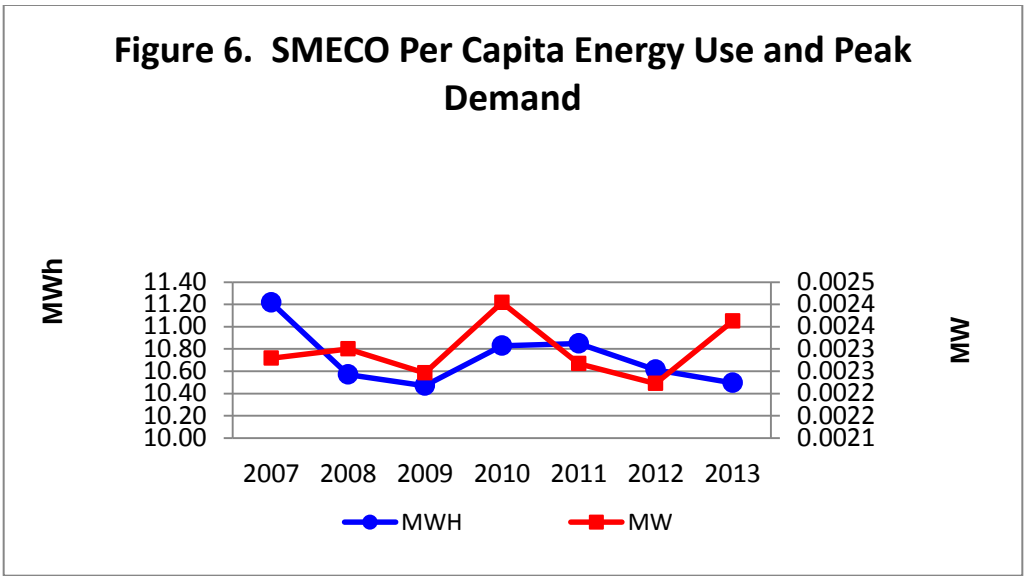
Pepco's per capita goal for energy use is 8.39 MWh
Pepco's per capita goal for peak demand reduction is 0.0017 MW



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

The following issues are expected to be addressed by the Commission in 2014.

- EmPOWER Program Cycle Planning – Over the next year, the utilities, in consultation with the Working Group, will develop and submit an EmPOWER Maryland Portfolio Plan for 2015-2017 designed to achieve energy savings and demand reduction goals beyond 2015. Each utility's portfolio will undergo the same process and scrutiny as the EmPower Maryland Portfolio Plans for 2009-2011 and 2012-2014.

- EmPOWER Program Modifications – The Commission will continue to review and either accept or deny 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, changes to program budgets, and changes to program incentive structures.

- Baseline and Potential Studies – A Request for Proposal ("RFP") has been issued for a contractor to develop a baseline and potential studies for the purpose of assisting the EmPOWER Planning group develop new goals beyond 2015 and developing new programs for the 2015-2017 planning cycle.

- 2015-2017 EmPOWER Plans – The utilities will file with the Commission by September 1, 2014, their 2015-2017 EmPOWER Maryland Plans. The Commission will hold hearings and issue an order on the utility filings.

Conclusions and Observations

2013 marked the second year of the 2012-2014 EmPOWER cycle and all of the utilities' approved EmPOWER Maryland programs were operational for the entire year. Marked by the milestone of its first one million MWh saved in a given year, 2013 was the most successful year for the utilities' EmPOWER programs to date for energy reductions, in aggregate reaching 106% of the energy reduction targets and increased savings by 31% over 2012. Reported energy savings in 2013 (1,056,670 MWh) comprised over 31% of the program-to-date energy savings (3,329,575 MWh). A major factor for the annual energy savings exceeding one million MWh is the focus on C&I programs, contributing significant savings and in most cases achieving over 90% of the 2013 energy savings targets. This could be a sign that the C&I customers are increasingly aware of these programs and more confident in the economic outlook that are willing to make the selection of energy efficient equipment a priority in business decisions.

As of December 31, 2013, the utilities' EmPOWER Maryland program energy savings are 61% of the 2015 EmPOWER Maryland goal. The reported peak demand reductions account for 73% of the 2015 EmPOWER Maryland goal. However, the direct load control programs, which have contributed a majority of the program-to-date demand savings, have begun to plateau and in some cases have lost participants, as the utilities are approaching or have reached forecasted install rates for peak load reduction devices. The utilities need MW reductions from smart grid enabled dynamic pricing programs, as evidenced by the 300 MW of peak demand savings contributed by Pepco's program, and CHP type programs in order to meet the 2015 EmPOWER peak demand reduction goals.

Looking ahead to the remaining year of the 2012-2014 EmPOWER Maryland plan cycle and the initiation of a new cycle, the Commission acknowledges the possibility that the currently approved programs may fall short of the energy reduction goals for 2015, however, if recent acceleration of progress continues, they may in fact meet their 2015 goals. In order to reach the 2015 statutory goals of 10% reduction in per capita energy usage and 15% reduction in per capita peak demand, the Commission has directed the utilities, the Commission Staff, and other interested stakeholders to continue to convene the working groups to explore and develop further program enhancements to present to the Commission as a part of the EmPOWER Maryland portfolio of programs.

Looking beyond 2015, the Commission has directed the EmPOWER Maryland Work Group to develop programs for the 2015-2017 EmPOWER cycle and to develop energy and demand reduction goals. The utilities will file their 2015-2017 plans by September 1, 2014 and the Work Group will file the recommended EmPOWER goals beyond 2015 in a similar time frame. The Commission will continue to work in coordination with other State agencies and the Legislature to establish the appropriate energy savings and demand reduction goals, and subsequently determine what programs will be included in the next program cycle to meet them.