PUBLIC SERVICE COMMISSION OF MARYLAND

The EmPOWER Maryland Energy Efficiency Act STANDARD REPORT OF 2013

With Data for Compliance Year 2012

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 2013 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 percent reduction on per capita energy consumption and a 15 percent 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 percent reduction in the per capita energy consumption[2] and all of the 15 percent 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

2012 marked the first year in the second EmPOWER Maryland program cycle, with the five largest electric utilities[3] (hereinafter "utilities") fully implementing their Commission-approved EmPOWER Maryland EE&C portfolios[4] and four utilities offering DR programs.[5] For the first time since the utilities began offering EmPOWER programs in 2009, the reported annual energy savings exceeded the forecasted energy and exceeded 2011 energy savings by 36 percent. Despite this improving program production, the utilities, combined, still only manage to reach 41 percent of the 2015 EmPOWER Maryland energy reduction goal. Peak demand reductions fell

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

[3] 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").

[4] 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 1957.

[5] The four utilities with approved DR programs are BGE, Pepco, DPL, and SMECO.

well short of 2012 forecasts, as the utility Direct Load Control ("DLC") programs started to reach saturation points where the number of participants was getting close to the number of expected program participants. The utilities only achieved 55 percent of the 2012 demand reduction target and are at 51 percent of the 2015 demand reduction goal, although peak demand reductions will need to be achieved through other programs like smart grid enabled dynamic pricing and Combined Heat and Power ("CHP") in order to meet the 2015 EmPOWER Maryland demand reduction goal.

On a per capita basis, the utilities appear to be moving towards reaching the EmPOWER Maryland goals of a 10 percent per capita reduction in energy use and a 15 percent reduction in per capita peak demand. This apparent disconnect between the per capita goals and the energy and demand reductions achieved through the utilities program is because much of the energy savings achieved to date is due to the economic downturn, mostly moderate weather in the winter and summer, and other activities outside the scope of the utility-run EmPOWER Maryland programs.[6] A return to normal economic activity and any hotter summer weather could cause the utilities to fall short of the EmPOWER Maryland per capita goals.

In order to augment the utilities' current EmPOWER Maryland portfolios' performance, Commission Order No. 84569 provided increased guidance and framework for the 2012-2014 program cycle. This included the creation of various workgroups to enhance and expand program offerings, standardization of incentive structures, the transition of Limited Income Energy Efficiency programs to the Maryland Department of Housing and Community Development, and necessary updates to budgets and surcharges associated with the EmPOWER Maryland program. The workgroups met on a consistent basis throughout 2012 and recommended several programs for the Commission to consider adopting. The Commission approved the following additional programs in 2012; a Behavior Based program in the residential portfolio and a Combined Heat and Power ("CHP") program for the commercial portfolio. The Commission also rejected several program proposals, including a Consumer Electronics program and a proposal to assist the counties in the state with additional funds to train the county building inspectors on the most up-to-date building codes.

Initiative Highlights

- Program-to-date, the utilities' EmPOWER Maryland programs have saved a total of 2,249,566 megawatt hours ("MWh") and 1,070 megawatts ("MW") (see Table 1[7] on the following page for individual utility savings).

- The utilities, to date, have spent over $729 million on the EmPOWER Maryland programs, including approximately $380 million on EE&C programs, and $349 million on DR programs.

- Program-to-date, 8,483 low-income customers participated through the Residential Low-Income Programs, of that 2,479 participated in 2012.

- The average monthly residential surcharge bill impacts[8] for 2012 were as follows:

[6] Examples of activities outside the scope of EmPOWER Maryland are distributed generation, and conservation efforts by individuals, such as lowering the thermostat or turning off lights when leaving the room.
[7] Table 1 displays energy savings at Gross Wholesale level. The energy savings in the Gross Wholesale level do not include Net-to Gross ratios.

- BGE: $1.28 (EE&C) and $0.75 (DR), totaling $2.03.
- Pepco: $1.13 (EE&C) and $1.53 (DR), totaling $2.66.
- PE: $1.67 (EE&C only).
- DPL: $1.07 (EE&C) and $1.89 (DR), totaling $2.96.
- SMECO: $1.52 (EE&C) and $1.47 (DR), totaling $2.99.

Table 1. EE&C and Demand Response Reported Achievements

	2012 Reported Reduction*	Program-to-Date Reduction**	2012-2014 Interim Target***	Percentage of 2015 Goal
BGE				
Electric Consumption (MWh)	440,293	1,357,172	41%	38%
Demand Reduction (MW)	38.766	746.933	5%	59%
Pepco				
Electric Consumption (MWh)	194,087	486,505	37%	39%
Demand Reduction (MW)	33.010	194.702	8%	29%
PE				
Electric Consumption (MWh)	98,805	224,386	40%	54%
Demand Reduction (MW)	13.465	30.748	38%	146%
DPL				
Electric Consumption (MWh)	36,912	89,562	26%	62%
Demand Reduction (MW)	4.985	38.588	6%	214%
SMECO				
Electric Consumption (MWh)	38,524	91,941	44%	110%
Demand Reduction (MW)	12.753	58.621	42%	42%
Total				
Electric Consumption (MWh)	808,621	2,249,566	39%	41%
Demand Reduction (MW)	102.979	1,070.004	8%	51%

*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.

[8] Bill impacts are calculated assuming an average 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.

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 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.[9] 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. Overall, 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, but only reach approximately 69 percent 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, which means the utilities are approaching expected participation. In order to reach the 15 percent EmPOWER 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 additional programs or initiatives are necessary to achieve the 2015 energy savings goals.

Table 2. EE&C and Demand Response Forecasted Achievements in 2009-2015 EmPOWER Plans (as Percentage Against EmPOWER Maryland Target)[10]

	Total Annualized Energy Savings Forecasted	Percentage of Annualized Energy Savings Reduction Compared to the 2015 Goal	Total Coincident Peak Demand Reduction	Percentage of Coincident Peak Demand Reduction Compared to the 2015 Goal
BGE	2,075,313	58%	1,077.113	85%
Pepco	945,547	76%	615.429	92%
PE	373,735	90%	54.780	261%
DPL	208,929	146%	265.562	1475%
SMECO	154,897	185%	76.214	55%
Total	3,758,421	69%	2,089.097	99%

Table 1 reflects that the reported energy and peak demand reductions to date are significantly lower than the achievements projected in Table 2 for 2015 in the 2012-2014 utility

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

[10] 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 2012. 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.

plans. The most important element in achievement shortcomings to date appears to be the late start of the programs.[11]

In 2012, 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 36 percent compared to 2011. Table 1 illustrates program success against the 2012 Interim Target and then against the 2015 EmPOWER Maryland goal.

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 percent reduction in the State's energy consumption[12] and all of the 15 percent 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.[13] 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.

[11] 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.

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

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

BGE

BGE's current portfolio was approved by Order No. 84569 on December 22, 2011, and continued administering seven residential and six commercial EE&C programs throughout 2012. The programs were designed to save approximately 2.1 million MWh by 2015. The Company continues to achieve the most energy savings and demand reduction to date.

BGE EmPOWER Programs

Residential Programs

Lighting

Appliance Rebate

Appliance Recycling

Quick Home Energy Check-up

Home Performance with Energy Star

New Homes

HVAC

Commercial Programs

Small Business Solutions

Prescriptive

Custom

New Construction

Retrocommissioning

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 2012, the QHEC program reported 62,998 participants and over 757,000 measures installed and energy savings of 40,829 MWh, easily surpassing the 2012 energy target of 14,052 MWh. The Home Performance with ENERGY STAR Program, a more intensive, wholistic Residential Retrofit program, improved over 2011 results, matching its participation and exceeding the targeted measures. Energy savings were below projections, but this is most likely due to the higher costs of measures which account for the largest savings, which may act as a deterrent to consumers.

BGE's Commercial programs had an overall successful 2012, exceeding the forecasted energy savings by almost 22 percent. The Retrocommissioning program finally gained traction in 2012, completing 43 projects and exceeding forecasted energy savings by 118 percent. There is some optimism that this break-out year in 2012 will continue into 2013, with an improving economy. Additionally, BGE received Commission approval to conduct a CHP program on June 5, 2012. Based on the Request for Proposals received, BGE expects to approve 16 applications with potential annual energy savings of 102,000 MWh.

As noted in Table 3, in 2012, BGE's EE&C programs achieved 117 percent, or 440,293 MWh, of its 2012 EE&C electric consumption reduction target. BGE's portfolio of programs, including demand response, achieved 36 percent, or 39 MW of its 2012 peak demand reduction target, as noted in Table 4. BGE reached 38 percent and 59 percent of their 2015 goal for energy savings and demand, respectively.

Table 3. BGE EE&C Interim Reported[14] Achievements

	2012 Electric Consumption Reduction (MWh)	Percentage of 2012 Target*	Program-to-Date Electric Consumption Reduction (MWh)***	Percentage of 2015 Goal
EmPOWER Maryland Targets**	377,665		3,593,750	
BGE Portfolio of Programs	440,293	117%	1,357,172	38%

*Percentage of energy savings forecasted for the year compared to actual savings.
**EmPOWER Maryland Targets are based upon the utility's individual EmPOWER Maryland filing which reflects the level of reduction the utility forecasted it could achieve.
*** 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[15]

	2012 Peak Demand Reduction (MW)	Percentage of 2012 Target*	Program-to-Date Peak Demand Reduction (MW)***	Percentage of 2015 Goal
EmPOWER Maryland Targets**	106.963		1,267	
BGE Portfolio of Programs	38.766	36%	746.933	59%

*Percentage of demand savings forecasted for the year compared to actual savings.
**EmPOWER Maryland Targets are based upon the utility's individual EmPOWER Maryland filing which reflects the level of reduction the utility forecasted it could achieve.
*** 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.

[14] Reported savings are unverified energy savings and demand reductions based the utilities' quarterly programmatic reports. An independent verification of savings is conducted annually.
[15] 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 2015 peak reduction goals.

Pepco

Pepco's portfolio was approved with regard to program design and implementation by Order No. 84569 on December 22, 2011. Pepco's approved plan included eight residential and seven non-residential EE&C programs, which were designed to save approximately 945,547 MWh by 2015.[16] 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

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

Commercial Programs

Master Meter and Multi-Family
Small Business
Prescriptive
Custom
New Construction
Retrocommissioning
Combined Heat and Power

Pepco's most successful program to date continued to be the Lighting and Appliance program among the residential offerings. Pepco's Appliance Programs, both Appliance Rebate and Recycling, surpassed its forecasted appliance rebates by 9 percent for a total of 14,934 rebated appliances during 2012. Pepco's QHEC programs also outperformed participation projections during 2012 by over 100 percent, or 16,700 participants.

The Commercial programs reported much higher energy savings in 2012 when compared to 2011, with an over 450 percent increase in energy savings. Despite this increase in energy savings in 2011, Pepco's Commercial program only achieved 55 percent of the 2012 forecasted energy savings levels. Among its commercial programs, the Prescriptive Program, which offers rebates on standard commercial items such as overhead lighting, occupancy sensors and motors, continued to contribute the most savings, while the Custom Measure and Retrocommissioning both exceeded participation forecasts. Pepco received Commission approval to conduct a CHP program on June 5, 2012. Based on the Request for Proposals received, Pepco expects to approve 11 applications with potential annual energy savings of 219,000 MWh, which is more than the energy savings reported for the Commercial portfolio, program-to-date.

As noted in Table 5, in 2012, Pepco's EE&C programs achieved 91 percent, or 194,087 MWh, of its 2012 EE&C electric consumption reduction target. Pepco's portfolio of programs, including Demand Response, achieved 83 percent, or 33.010 MW of its 2012 peak demand reduction target, as noted in Table 6. Pepco reached 39 percent and 29 percent of their 2015 goal for energy savings and demand, respectively.

[16] Plan at 115851, Table ES-1.

Table 5. Pepco EE&C Energy Savings Interim Reported[17] Achievements

	2012 Electric Consumption Reduction (MWh)	Percentage of 2012 Target*	Program-to-Date Electric Consumption Reduction (MWh)***	Percentage of 2015 Goal
EmPOWER Maryland Targets**	212,526		1,239,108	
Pepco Portfolio of Programs	194,087	91%	486,505	39%

* Percentage of energy savings forecasted for the year compared to actual savings.
**EmPOWER Maryland Targets are based upon the utility's individual EmPOWER Maryland filing which reflects the level of reduction the utility forecasted it could achieve.
*** 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[18]

	2012 Peak Demand Reduction (MW)	Percentage of 2012 Target*	Program-to-Date Peak Demand Reduction (MW)***	Percentage of 2015 Goal
EmPOWER Maryland Targets**	39.990		672	
Pepco Portfolio of Programs	33.010	83%	194.702	29%

* Percentage of demand savings forecasted for the year compared to actual savings.
**EmPOWER Maryland Targets are based upon the utility's individual EmPOWER Maryland filing which reflects the level of reduction the utility forecasted it could achieve.
*** 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 beg beginning January 1, 2008.

[17] Reported savings are unverified energy savings and demand reductions based the utilities' quarterly programmatic reports. An independent verification of savings is conducted annually.
[18] 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 portfolio was approved with regard to program design and implementation by Order No. 84569 on December 22, 2011. The approved plan includes a portfolio of nine residential and five commercial EE&C programs. PE's programs are designed to save over 373,700 MWh by the end of 2015.

PE EmPOWER Programs

Residential Programs

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

Commercial Programs

- Small Business
- Prescriptive
- Custom
- New Construction
- Retrocommissioning

PE programs continued to perform adequately, with the exceptions of the Quick Home Energy Check-up and New Construction programs, which out-performed their forecasts. The primary concern with the Residential programs is the Energy Efficient Kits program accounted for 46 percent of the total residential energy savings and was only approved for 2012. In fact, PE is not offering this program in 2013 as the Company has mailed out almost 126,000 kits during the 15 months the program has been active. Therefore, barring a significant ramp up in savings from other programs, expectations for total portfolio energy savings should be tempered going forward.

This year also saw the start of the Conservation Voltage Reduction ("CVR") Program and was able to produce approximately 22,000 MWh in savings in the second half of 2012. It is important to note that since this is a new program offering, the CVR program has not had any evaluation work done to verify the energy savings reported by PE. Energy savings may be reduced upon completion of the expected evaluation work by Navigant and Itron.

The portfolio's commercial and industrial ("C&I") programs returned mixed results for 2012. The Small Business Energy Efficiency Kits program exceeded forecasts, while the Prescriptive and Small Business Direct Install program fell well short of expectations. Recently, the Maryland Energy Administration has raised questions about the two-tier incentive structure of the Prescriptive program because of fears that it is impacting participation. The Commission has since ordered PE to provide additional information on this program.

As noted in Table 7, in 2012, PE's EE&C programs achieved 71 percent, or 98,805 MWh, of its 2012 EE&C electric consumption reduction target. PE's portfolio of programs achieved 68 percent, or 13 MW of its 2012 peak demand reduction target, as noted in Table 8. As of the end of 2012, PE reached 54 percent and 146 percent of the 2015 goal for energy savings and demand, respectively.

Table 7. PE EE&C Energy Savings Interim Reported[19] Achievements

	2012 Electric Consumption Reduction (MWh)	Percentage of 2012 Target*	Program-to-Date Electric Consumption Reduction (MWh)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	139,163		415,228	
PE Portfolio of Programs	98,805	71%	224,386	54%

* Percentage of energy savings forecasted for the year compared to actual savings.
**EmPOWER Maryland Targets are based upon the utility's individual EmPOWER Maryland filing which reflects the level of reduction the utility forecasted it could achieve.

Table 8. PE Peak Demand Reduction Interim Reported Achievements[20]

	2012 Peak Demand Reduction (MW)	Percentage of 2012 Target*	Program-to-Date Peak Demand Reduction (MW)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	20		21	
PE Portfolio of Programs	13.466	68%	30.749	146%

* Percentage of demand savings forecasted for the year compared to actual savings.
**EmPOWER Maryland Targets are based upon the utility's individual EmPOWER Maryland filing which reflects the level of reduction the utility forecasted it could achieve.

[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] 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 portfolio was approved with regard to program design and implementation by Order No. 84569 on December 22, 2011. DPL's approved plan included eight residential and six non-residential EE&C programs, which were designed to save close to 209,000 MWh by 2015. DPL's portfolio of EE&C programs is applicable across the residential, commercial, government, and institutional customer base. 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

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

Commercial Programs

Master Meter and Multi-Family
Small Business
Prescriptive
Custom
New Construction
Retrocommissioning
Combined Heat and Power

In 2012, the Company significantly ramped up enrollment in its Quick Home Energy Check-up Program, exceeding forecasted participation by over 230 percent, due to the high participation rate of multi-family units. DPL's reported program energy savings exceeded the forecasted savings by over 600 percent. Eighty three percent of the participation and 85 percent of the energy savings occurred in the second half of 2012. If this trend continues into 2012, the Company may have to request additional funding for this program from the Commission.

The Commercial programs did not perform as well as the Residential programs, only achieving 63 percent of the energy reduction forecast for 2012. One of the primary reasons for this shortfall in reported energy savings is that in the second half of 2012, several projects in the Prescriptive program, equating to 1,700 MWh in energy savings, were not completed as scheduled and therefore resulted in lower reported energy savings in 2012. These projects should be completed in the first quarter of 2013 and the energy savings will be recognized at the completion of the projects. The Custom program was the most successful commercial program in 2012, surpassing its forecasts for participation and energy savings. DPL also received Commission approval to conduct a CHP program on June 5, 2012. Based on the Request for Proposals received, DPL expects to approve six applications with potential annual energy savings of 33,000 MWh, which is more than the energy savings reported for the Commercial portfolio, program-to-date.

As noted in Table 9, in 2012, DPL's EE&C programs achieved 92 percent, or 36,912 MWh, of its 2012 EE&C electric consumption reduction target. DPL's portfolio of programs, including Demand Response, achieved 70 percent, or 5 MW of its 2012 peak demand reduction target, as noted in Table 10. DPL reached 62 percent and 214 percent for energy savings and demand, respectively.

Table 9. DPL EE&C Energy Savings Interim Reported[21] Achievements

	2012 Electric Consumption Reduction (MWh)	Percentage of 2012 Target*	Program-to-Date Electric Consumption Reduction (MWh)***	Percentage of 2015 Goal
EmPOWER Maryland Targets**	40,295		143,453	
DPL Portfolio of Programs	36,912	92%	89,562	62%

* Percentage of energy savings forecasted for the year compared to actual savings.
**EmPOWER Maryland Targets are based upon the utility's individual EmPOWER Maryland filing which reflects the level of reduction the utility forecasted it could achieve.
*** 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[22]

	2012 Peak Demand Reduction (MW)	Percentage of 2012 Target*	Program-to-Date Peak Demand Reduction (MW)***	Percentage of 2015 Goal
EmPOWER Maryland Targets**	7.165		18	
DPL Portfolio of Programs	4.985	70%	38.588	214%

* Percentage of demand savings forecasted for the year compared to actual savings.
**EmPOWER Maryland Targets are based upon the utility's individual EmPOWER Maryland filing which reflects the level of reduction the utility forecasted it could achieve.
*** 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.

[21] Reported savings are unverified energy savings and demand reductions based the utilities' quarterly programmatic reports. An independent verification of savings is conducted annually.
[22] 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 portfolio was approved with regard to program design and implementation by Order No. 84569 on December 22, 2011. The approved plan included eight residential EE&C programs and three non-residential EE&C programs. SMECO's programs were designed to reduce energy consumption by over 154,800 MWh by the end of 2015. 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

Lighting

Appliance Rebate

Appliance Recycling

Quick Home Energy Check-up

Home Performance with Energy Star

New Homes

HVAC

Behavior Based

Commercial Programs

Small Business

Prescriptive

Custom

SMECO's residential portfolio of programs exceeded the 2012 forecast for energy savings by 10 percent. Many of SMECO's Residential programs performed well during the 2012 program year with all but HVAC Rebates exceeding their participation targets. Quick Home Energy Check-Up was the most successful program, which achieved 364 percent of its forecasted participation target. This can be attributed to the prominence of multi-family dwellings participating in this program, comprising 80 percent of all the QHECs completed.

Similar to the Residential programs, the C&I programs also exceeded the 2012 forecast for energy savings, by 54 percent. The Prescriptive and Custom Measures accounted for the majority of energy savings, with both programs surpassing forecasted energy savings by 84 percent for the Prescriptive programs and 101 percent for the Custom program. Continued success is expected for 2013, as there are 101 pre-approved Prescriptive projects and 9 pre-approved Custom projects in the pipeline for 2013.

As noted in Table 11, in 2012, SMECO's EE&C programs achieved 116 percent, or 38,524 MWh, of its 2012 EE&C energy reduction target. SMECO's portfolio of programs, including Demand Response, achieved 91 percent, or 13 MW of its 2012 peak demand reduction target, as noted in Table 12. SMECO reached 110 percent and 42 percent for energy savings and demand, respectively.

Table 11. SMECO EE&C Energy Savings Interim Reported[23] Achievements

	2012 Electric Consumption Reduction (MWh)	Percentage of 2012 Target*	Program-to-Date Electric Consumption Reduction (MWh)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	33,321		83,870	
SMECO Portfolio of Programs	38,524	116%	91,941	110%

* Percentage of energy savings forecasted for the year compared to actual savings.
**EmPOWER Maryland Targets are based upon the utility's individual EmPOWER Maryland filing which reflects the level of reduction the utility forecasted it could achieve.

Table 12. SMECO Peak Demand Reduction Interim Reported Achievements[24]

	2012 Peak Demand Reduction (MW)	Percentage of 2012 Target*	Program-to-Date Peak Demand Reduction (MW)	Percentage of 2015 Goal
EmPOWER Maryland Targets**	14		139	
SMECO Portfolio of Programs	12.753	91%	58.621	42%

* Percentage of demand savings forecasted for the year compared to actual savings.
**EmPOWER Maryland Targets are based upon the utility's individual EmPOWER Maryland filing which reflects the level of reduction the utility forecasted it could achieve.

[23] Reported savings are unverified energy savings and demand reductions based the utilities' quarterly programmatic reports. An independent verification of savings is conducted annually.
[24] 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. While DHCD retained control for each of the EmPOWER territories for at least half of the year, reported production was inconsistent by territory and often below expectations and previous trending. Overall, DHCD reports saving approximately 30 percent of its 2012 residential weatherization forecast, or 1,553 MWhs.

New to the EmPOWER Maryland programs is the Multi-family Energy Efficiency and Housing Affordability program ("MEEHA"). The program was implemented across the EmPOWER territories, but to-date, has not recorded any costs or savings. However, the MEEHA program is different from a residential weatherization program. This program targets buildings with many individual residences in them and seeks to provide weatherization and energy efficiency services to an entire building. This scope requires significant evaluation, design, and weatherization time resulting in most projects taking between 6 and 12 months.

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 percent by 2011, 10 percent by 2013, and 15 percent by 2015. In instances of system reliability or high electricity prices during critical peak hours, these programs commonly use a switch or thermostat for a central air conditioning system or an electric heat pump to briefly curtail usage. The Commission approved four residential Demand Response programs in early 2008 (BGE's DR program was approved in December of 2007), with all of the programs operational by the end of 2009.[25]

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%[26]), except for SMECO. SMECO uses an initial 2 degree offset followed by 30 percent cycling for the thermostats and a 50 percent cycling option followed by 30 percent 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.

[25] 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.

[26] 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 progress in installing these devices for each utility direct load control ("DLC") program in 2012 and program-to-date through December 31, 2012. The main barrier preventing the utilities from reaching their demand reduction goals concerned market saturation. SMECO has reached 50 percent of the expected customer participation rate,[27] and BGE's has installed devices in 35 percent of its service territory's eligible homes (those with central air conditioning).[28] The 2012 year contributed approximately 5 percent of total devices installed to date.

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

Utility	2012	Program-to-Date
BGE	6,001	361,702
Pepco	11,075	93,003
DPL	1,852	24,635
SMECO	5,145	37,935
Total	24,073	517,275

Table 15 summarizes the DLC program performance for 2012 and program-to-date. The total coincident peak demand reduction reported in 2012 was 24.190 MW, about 24 percent of the 2012 target of 102.400 MW. The primary reason for this shortfall can be attributed to several of the DLC programs approaching the expected levels of customer participation. BGE saw a decrease in peak demand reduction in the DLC program as more customers ended program participation than signed up to participate.[29] Program-to-date, the four utilities have achieved 774.080 MW of demand reduction, and achieved 88 percent of coincident peak demand reductions for the 2012-2014 EmPOWER Maryland Target.

[27] Case No. 9157, *In the Matter of Southern Maryland Electric Cooperative, Inc.'s Energy Efficiency, Conservation and Demand Response Programs Pursuant to the EmPOWER Maryland Energy Efficiency Act of 2008*; Southern Maryland Electric Cooperative, Inc. - Q3/Q4 Semi-Annual EmPOWER Maryland Report, p. 31.

[28] Case No. 9154, *In the Matter of Baltimore Gas and Electric Company's Energy Efficiency, Conservation and Demand Response Programs Pursuant to the EmPOWER Maryland Energy Efficiency Act of 2008*; Baltimore Gas and Electric Company - Semi-Annual Report for Third and Fourth Quarters for July 1 through December 31, 2012, p. 33.

[29] The drop in MW capability is not unusual when a utility approaches the saturation level of installed devices in a mature DLC program. Additionally, BGE, experiences an approximate 20 percent turnover in customers in its service territory, which could cause a decrease in active devices, if a participating customer moves out of their residence and the new customer declines participating in the program.

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

Utility	2012 Peak Demand Target	2012 Reported	Percent of 2012 Target	Program-to-Date Reported	2012-2014 EmPOWER Maryland Target	Percent of 2012-2014 Target
BGE	43.919	-24.628	-156%	548.265	508.700	108%
PEPCO	36.920	36.216	98%	126.932	262.865	48%
DPL	12.861	5.452	42%	54.171	90.430	60%
SMECO	8.700	7.150	82%	44.710	14.800	302%
Total	**102.400**	**24.190**	**24%**	**774.080**	**876.795**	**88%**

PJM RPM Capacity Market

The DLC programs resulted in a combined 625 MW bid into the PJM Reliability Pricing Model ("RPM") auction for Delivery Year ("DY") 2015-2016 , a 19 percent decrease from 2010 PJM bid of 772 MW for DY 2014-2015. The utilities collectively have lowered their bids to the PJM capacity market accordingly as the DLC programs approach market saturation levels. To date, these programs have accounted for 4,431 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	Total
Total	217	415	662	953	803	756	625	4,431

Table 17 illustrates the amount of capacity cleared in the May 2011 and May 2012 RPM Capacity market for the delivery years of 2014-2015 and 2015-2016, respectively. The table also calculates 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 2015-2016 DY auction is 64 MW less than the amount of capacity cleared in 2014-2015 DY, due to the lower capacity cleared from the DR program. However, the expected revenue from PJM in the 2015-2016 DY is $9.1 million higher than the DY 2014-2015.

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

	DY 2014-2015					DY 2015-2016				
	Cleared Bids (MW)				Expected Revenue	Cleared Bids (MW)				Expected Revenue
	DR	DP	EE&C	Total	($Million)	DR	DP	EE&C	Total	($Million)
Total	756	317	156	1,229	$57.42	625	415	125	1,165	$66.51

EmPower Maryland Funding Levels

EE&C Programs

The Commission approved a three-year budget for each utilities' EmPOWER Maryland proposal. Table 18 breaks down the approved budgets for 2012 for each utility. Table 19 illustrates what each utility actually spent in 2012 on their EmPOWER Maryland programs.

Table 18. Forecasted 2012 EE&C Budgets from EmPOWER Filings

	Residential	Commercial	Total
BGE	$ 37,858,707	$ 36,541,588	$ 74,400,295
Pepco	$ 16,788,481	$ 21,033,402	$ 37,821,883
PE	$ 14,720,560	$ 6,895,500	$ 21,616,060
DPL	$ 5,211,323	$ 9,392,920	$ 14,604,243
SMECO	$ 5,477,840	$ 1,669,870	$ 7,147,711
Total	$ 80,056,911	$ 75,533,280	$ 155,590,191

Table 19. Reported 2012 EE&C Spending

	Residential	Commercial	DHCD Limited Income Program	Total
BGE	$ 46,519,566	$ 40,318,150	$ 1,132,501	$ 87,970,217
Pepco	$ 21,222,217	$ 15,882,160	$ 272,344	$ 37,376,721
PE	$ 13,523,089	$ 2,493,947	$ 199,719	$ 16,216,755
DPL	$ 6,302,490	$ 9,740,214	$ 272,344	$ 16,315,048
SMECO	$ 7,043,591	$ 2,211,223	$ 90,782	$ 9,345,596
Total	$ 94,610,953	$ 70,645,694	$ 1,967,690	$ 167,224,338

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.[30]

Table 20. 2012 EE&C Surcharges and Revenue Requirements[31]

	Residential	Large C&I	Small C&I	Revenue Requirement[32]
BGE	$0.00128	$0.00087	$0.00210	$36,307,833
Pepco	$0.001131	$0.000831	$0.000831	$14,460,097
PE	$0.00167	$0.00043	$0.00043	$10,106,199
DPL	$0.001073	$0.000754	$0.000754	$3,851,247
SMECO	$0.00152	$0.00018	$0.00018	$3,720,160

[30] *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.

[31] All surcharges are per kWh.

[32] Revenue Requirements are a combination of residential revenue requirements and C&I revenue requirements.

Each of the EmPOWER utilities continued the operation of each of their respective suite of energy-efficiency programs in 2012. Since all of the 2012 surcharge filings were made prior to the Commission approving the 2012-2014 EmPOWER plans, each utility filed its EmPOWER Maryland surcharge based on the 2012 budgets contained in their respective 2012-2014 plans. The Commission Order No. 84569 directed that the utilities file any revisions to the surcharge if there was a material change to the 2012 budgets as a result of the directives of Order No. 84569. BGE, PE, and SMECO requested surcharges for their respective revenue requirements and received approval from the Commission, effective January 1, 2012. Pepco and DPL received approval from the Commission, effective February 1, 2012. The utilities did not file any revised EmPOWER surcharges for 2012, as there was not any material change to expected budgets or spending based on Order No. 84569.

Demand Response

BGE, DPL, Pepco, and SMECO operated their respective DR programs in 2012. Table 21 details the surcharges and revenue requirements of each utility with an approved DR project.[33]

Table 21. 2012 Demand Response Surcharges and Revenue Requirements[34]

	Residential Surcharge	C&I Surcharge	Revenue Requirement
BGE	$0.00075	N/A	$12,647,152
Pepco	$0.001526	$0.000101	$9,982,033
DPL	$0.001889	$0.001055	$6,200,815
SMECO	$0.00147	$0.00147	$5,227,487

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 2012 program year.

Table 22. Demand Response Forecasted and Reported Budgets

	Forecasted Budget	Reported Costs	Variance
BGE	$ 43,637,440	$ 35,926,197	$ (7,711,243)
Pepco	$ 35,081,294	$ 21,593,790	$ (13,487,504)
DPL	$ 10,112,113	$ 4,460,843	$ (5,651,270)
SMECO	$ 6,484,736	$ 6,479,631	$ (5,105)
Total	$ 95,315,583	$ 68,460,461	$ (26,855,122)

[33] PE did not have DR program in effect in 2012 and therefore did not file for a surcharge recovery.
[34] 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 enormity in scale of the EmPOWER Maryland initiative and the likelihood of higher 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 a third-party, independent evaluator model.[35] 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.[36] 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 2012.

Overall Findings of the 2011 EmPOWER EE&C Program

Energy and Peak Demand Savings

In 2011, Navigant's evaluation of the first year savings was 325,000 MWh and 49,840 MW, which was 98 percent of the utilities' reported energy and demand savings. Itron's verified energy (MWh) and demand (MW) estimates for the EmPOWER portfolio are only slightly less than the evaluated savings estimate. 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 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 2012 should be very similar to the evaluation results.

[35] *See* Commission Order Number 82869 issued on August 31, 2009 in Case Nos. 9153 – 9157.

[36] 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 2011 cost-effectiveness results per utility and by sector.

Table 23. 2011 Portfolio Benefit – Cost Results

	Residential	Commercial	Portfolio
BGE	1.21	1.8	1.35
Pepco	0.88	1.56	1.24
PE	3.93	1.17	2.53
DPL	1.12	1.35	1.12
SMECO	1.04	1.29	1.11
Statewide	1.43	1.61	1.51

EmPOWER programs were less cost-effective in 2011 than in 2010 even though more measures were installed in 2011 resulting in a greater total of MWh savings.[37] Staff calls attention to several factors that have played significantly into these results:

1. Avoided Cost of Energy and Capacity
   The avoided cost of energy and capacity was higher in 2010 than in 2011, resulting in substantially reduced cost-effectiveness results. For example, if the 2010 avoided cost of energy and capacity was used to calculate cost-effectiveness for the 2011 programs, the Pepco residential sector TRC ratio would be 1.26 instead of 0.88. The avoided costs for energy and capacity are calculated individually by the utilities, as each depends on the respective PJM markets (e.g., MAAC, SWMAAC, Pepco) they reside in zonally. For energy, costs have declined steadily as a result of the abundant discoveries of natural gas (the marginal fuel), which have depressed avoided costs from those originally forecasted in 2008 and throughout the lifetime of the programs. As for capacity, the 2011 PJM Base Residual Auction ("BRA") produced a significant drop in capacity costs in comparison to 2010 for all the utilities' price zones, with the exception of a marginal increase in the Allegheny Power ("AP") zone (PE's current zone). This trough in capacity prices continues until the 2013 Delivery Year when prices tick back up. Together, these significant adjustments decrease the monetary benefits of the programs, thereby decreasing the cost-effectiveness.

2. Increased Cost Per Unit of Energy Savings
   The cost per unit of energy savings in the residential sector increased from 2010 to 2011. This is not uncommon for energy efficiency programs as the most cost-effective savings are realized before the less cost-effective savings. Two factors play into this increase: 1) the smaller incremental savings reaped from each CFL or lighting measure as the 2007 Energy Independence Security Act ("EISA") regulations phase in; and 2) a smaller share of savings coming from the Lighting Programs in general which are the most cost-efficient Program within the utilities' portfolios.

[37] Potomac Edison was the only utility to see an improvement in cost-effectiveness from 2010 to 2011. This is due in large part to the energy efficiency kits delivered through the Residential Home Performance with Energy Star program.

3. Increased Share of Non Cost-Effective Programs
   Other programs are beginning to gain traction, and the prevailing customer choices are not always the most cost-effective ones. For example, 2011 saw an increase in the relative total overall share of program savings from market transformation programs such as the Home Performance with Energy Star and HVAC programs. Other non cost-effective programs include Quick Home Energy Checkup, Appliance Rebates and C&I Custom. These programs, which can take longer to become cost-effective, performed poorly in cost-effectiveness testing, and at least in the short-term are diminishing the cost-effectiveness of the residential sector as a whole.

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

In 2010, the Commission approved the Smart Grid Initiative ("SGI") for BGE, granted conditional approval for Pepco's SGI, and deferred the approval of DPL's SGI until DPL is able to demonstrate the cost-effectiveness of a revised business case for its SGI. In 2011, the Commission authorized Pepco to deploy its SGI project and held additional evidentiary hearings on DPL's revised business case. On May 8, 2012, the Commission issued Order No. 84890, which authorized DPL to deploy its SGI project.

In Order No. 84890, the Commission directed DPL to develop a comprehensive set of installation, performance, benefits and budgetary metrics that will allow the Commission to assess the progress and performance of the SGI, similar to the metrics developed and approved for BGE and Pepco. Additionally, the Commission directed DPL to develop comprehensive customer education plans for Commission approval and to participate in the workgroup process that has been ongoing since the approval of the BGE and Pepco Smart Grid Initiatives.

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 final decision. Subsequent orders were received on January 7, 2013 and January 13, 2013 which requires additional information from the utilities before a final Commission Order is issued on the matter. The AMI workgroup continued to meet throughout 2012 and delivered several reports to the Commission. On March 16, 2012, the AMI workgroup filed its "Dynamic Pricing Report" which was approved in Commission Order No. 84925, issued on May 25, 2012. On November 13, 2012 the AMI workgroups consensus Phase IIA Metrics were filed and the Commission approved these metrics by letter order on December 11, 2012.

There were several other AMI related filings in the last quarter of 2012, which were pending Commission approval in 2013;

- DPL filed its Phase I Education and Communication plan on October 26, 2012;
- Pepco and BGE filed a joint Cyber Security Process plan on November 14, 2012; and
- Pepco and BGE filed their individual Cyber Security Plans on November 14, 2012.

Separate from Case Nos. 9207 and 9208, SMECO has proposed a SGI, which is forecast to begin upon Commission approval. Hearings on the SMECO SGI were held from November 5 through November 8, 2012. During these hearings, SMECO presented their previously filed business case as well as the results of their AMI pilot program.

2012 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 percent reduction in peak demand in 2013 and the 10 percent per capita reduction in energy use and the 15 percent 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 2012, and compares the reported 2012 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 EmPOWER Maryland's energy savings. The Act measures success based on a per capita basis of the 2007 energy use baseline. Pepco's 2012 per capita results provide the perfect example of the disconnect between EmPOWER program achievement and the EmPOWER per capita goal achievement. In 2012, the Commission calculated Pepco's per capita energy use at 12.26 MWh, which is 12.3 percent reduction of the 2007 per capita energy use. In other words, based on 2012 energy sales and population, Pepco has achieved the 10 percent reduction goal in per capita energy use. However, Pepco's reported energy savings program to date are only 39 percent of the 2015 energy reduction goal. The disconnect between these two numbers is that the weather in 2012 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 2012, and compares the reported 2012 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 are more in line with the per capita reduction goal values. For example, according to the EmPOWER Maryland plans, the utilities are most likely going to fall short of the 15 percent peak reduction goal. The 2012 per capita peak demand numbers, show a similar shortfall in achieving the 15 percent reduction in per capita peak demand.

Table 27. 2012 Per Capita Energy Use Compared to 2015 EmPOWER Maryland Goal

EmPower Maryland - 10 Percent Reduction in Maryland Energy Sales 2015												
2012 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)	2012 Energy Sales Gross-Up by Loss Factor MWh	2012 Estimated Population (2)	2012 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 2012 Use and 2015 Goal MWh	2015 Energy Reduction Goal MWh	Utility Reported Savings Program-to-Date
BGE	13.41	12.07	1.34	33,059,685	2,695,592	12.26	8.5%	85.2%		33,525,028	-465,343	3,593,750	1,357,172
Pepco	9.32	8.39	0.93	15,357,031	1,878,112	8.18	12.3%	122.7%		15,892,578	-535,547	1,239,108	486,537
PE	18.46	16.62	1.85	7,511,960	443,715	16.93	8.3%	83.0%		7,748,215	-236,255	385,708	224,386
Delmarva	13.70	12.33	1.37	4,421,158	350,645	12.61	8.0%	79.7%		4,495,919	-74,760	165,106	89,567
SMECO	11.22	10.09	1.12	3,712,582	349,773	10.61	5.4%	53.7%		3,752,609	-40,027	83,870	91,941
Choptank	13.70	12.33	1.37	1,012,679	82,250	12.31	10.1%	101.3%		1,075,589	-62,910	23,834	
Hagerstown	9.33	8.39	0.93	317,876	40,092	7.93	15.0%	149.8%		345,038	-27,162	48,131	
Easton	20.25	18.23	2.03	268,435	16,121	16.65	17.8%	177.8%		337,855	-69,420	-37,585	
Thurmont	15.08	13.58	1.51	81,200	6,237	13.02	13.7%	136.9%		87,570	-6,370	8,214	
Berlin	11.05	9.95	1.11	42,453	4,515	9.40	14.9%	149.2%		49,946	-7,493	-2,371	
Williamsport	9.54	8.59	0.95	20,395	2,160	9.44	1.1%	10.7%		19,634	761	1,841	
Somerset	4.22	3.80	0.42	-	1,229	0.00	100.0%	1000.0%		7,072	-7,072	1,797	
A&N Coop	9.25	8.33	0.93	2,988	276	10.83	-17.0%	-169.8%		3,215	-227	570	
Total	**12.38**	**11.14**	**1.24**	**65,808,443**	**5,870,718**	**11.21**	**9.4%**	**94.3%**		**67,349,340**	**-1,540,897**	**6,615,496**	**2,249,603**

(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 2012 per Capita Energy Use is from the 2007 per Capita Energy use Column. For example, BGE's 2012 per Capita Energy use is 8.5% 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 2012 BGE's per capita energy use was 8.5% lower than the 2007 per capita energy use baseline. In other words, in 2012, BGE achieved 8.5% of the 10% EmPower Maryland goal, which is equivalent to reaching 85.2% of the 2015 per capita energy reduction target.

Table 28. 2012 Per Capita Peak Demand Compared to 2013 EmPOWER Maryland Goal

EmPower Maryland - 10 Percent Reduction in Maryland Peak Demand 2013													
2012 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)	2012 Peak Demand Weather Normalized	2012 Estimated Population (2)	2012 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 2012 Use and 2013 Goal	2013 Peak Demand Reduction Goal	Utility Reported Savings Program-to-Date
BGE	0.0028	0.0025	0.0003	6,403	2,695,592	0.0024	14.3%	143.2%		6,794	-391	796	747
Pepco	0.0020	0.0018	0.0002	3,356	1,878,112	0.0018	8.8%	87.6%		3,302	54	447	195
PE	0.0034	0.0030	0.0003	1,451	443,715	0.0033	2.6%	26.4%		1,380	71	-57	31
Delmarva	0.0032	0.0028	0.0003	983	350,645	0.0028	11.3%	113.3%		1,030	-47	-43	39
SMECO[5]	0.0023	0.0021	0.0002	777	349,773	0.0022	2.5%	24.9%		737	40	105	59
Choptank	0.0032	0.0028	0.0003	261	82,250	0.0032	-0.6%	-5.8%		235	26	-10	
Hagerstown[5]	0.0019	0.0017	0.0002	66	40,092	0.0016	11.9%	118.9%		68	-2	5	
Easton[5]	0.0045	0.0041	0.0005	66	16,121	0.0041	10.4%	104.3%		71	-6	-6	
Thurmont[5]	0.0027	0.0025	0.0003	15	6,237	0.0024	11.5%	115.2%		15.6	0	5	
Berlin[3]	0.0023	0.0021	0.0002	11	4,515	0.0024	-5.3%	-53.4%		10.0	1	1	
Williamsport[5]	0.0018	0.0016	0.0002	4	2,160	0.0016	8.9%	89.3%		3.6	0	1	
Somerset[5]	0.0011	0.0010	0.0001		1,229	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**	**13,392.408**	**5,870,442**	**0.0023**	**10.8%**	107.7%		**13,649**	**-256**	**1,244**	**1,070**

(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 2012 per Capita Peak Demand is 14.3% 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 2012 BGE's per capita peak demand was 14.3% lower than the 2007 per capita peak demand baseline. In other words, in 2012, BGE achieved 14.3% of the 10% EmPower Maryland goal, which is equivalent to reaching 143.2% of the 2013 per capita peak demand target.

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

Table 29. 2012 Per Capita Peak Demand Compared to 2015 EmPOWER Maryland Goal

EmPower Maryland - 15 Percent Reduction in Maryland Peak Demand 2015													
2012 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)	2012 Peak Demand Weather Normalized	2012 Estimated Population (2)	2012 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 2012 Use and 2015 Goal	2015 Peak Demand Reduction Goal	Utility Reported Savings Program-to-Date
BGE	0.0028	0.0024	0.0004	6,403	2,695,592	0.0024	14.3%	95.5%		6,547	-144	1,267	747
Pepco	0.0020	0.0017	0.0003	3,356	1,878,112	0.0018	8.8%	58.4%		3,154	202	672	195
PE	0.0034	0.0029	0.0005	1,451	443,715	0.0033	2.6%	17.6%		1,331	120	16	31
Delmarva	0.0032	0.0027	0.0005	983	350,645	0.0028	11.3%	75.5%		988	-5	23	39
SMECO[5]	0.0023	0.0019	0.0003	777	349,773	0.0022	2.5%	16.6%		720	57	139	59
Choptank	0.0032	0.0027	0.0005	261	82,250	0.0032	-0.6%	-3.9%		226	36	4	
Hagerstown[5]	0.0019	0.0016	0.0003	66	40,092	0.0016	11.9%	79.3%		65	1	10	
Easton[5]	0.0045	0.0039	0.0007	66	16,121	0.0041	10.4%	69.6%		71	-6	-5	
Thurmont[5]	0.0027	0.0023	0.0004	15	6,237	0.0024	11.5%	76.8%		15.0	0	6	
Berlin[3]	0.0023	0.0020	0.0003	11	4,515	0.0024	-5.3%	-35.6%		9.9	1	1	
Williamsport[5]	0.0018	0.0015	0.0003	4	2,160	0.0016	8.9%	59.6%		3.5	0	1	
Somerset[5]	0.0011	0.0009	0.0002		1,229	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**	**13,392.408**	**5,870,442**	**0.0023**	**10.8%**	**71.8%**		**13,134**	**259**	**2,135**	**1,070**

(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 2011 per Capita Peak Demand is from the 2007 per Capita Peak Demand Column. For exmple, BGE's 2011 per Capita Peak Demand is 12.2% 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 2011 BGE's per capita peak demand was 12.2% lower than the 2007 per capita peak demand baseline. In other words, in 2011, BGE achieved 12.2% of the 15% EmPower Maryland goal, which is equivalent to reaching 81.1% of the 2015 per capita peak demand target.

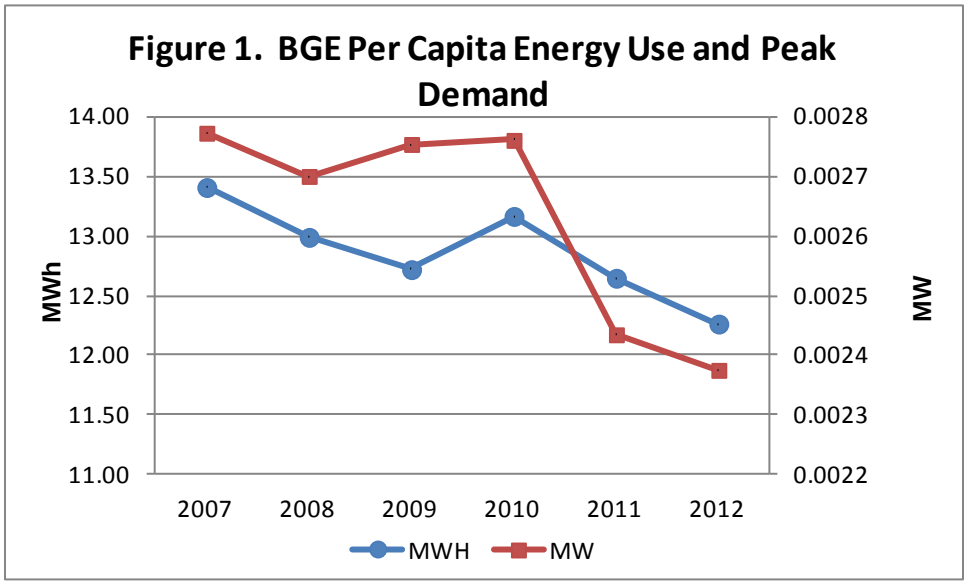
(5) Utilities did not provide weather normal peak demand data.

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

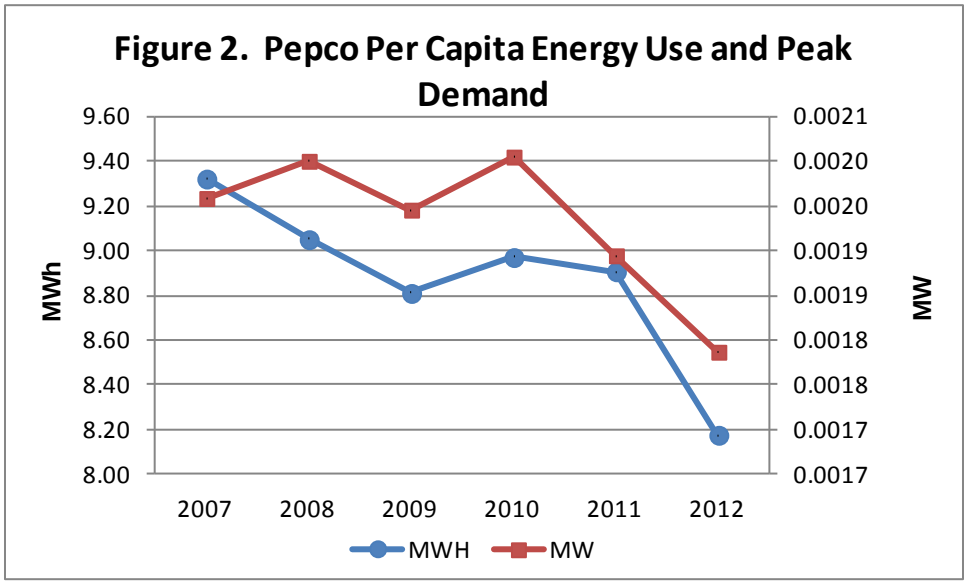
Table 30. 2007-2012 per Capita Energy Consumption and Peak Demand

Maryland Utility	Per Capita Energy Use MWh						Per Capita Peak Demand MW					
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012
BGE	13.41	12.99	12.72	13.17	12.65	12.26	0.0028	0.0027	0.0028	0.0028	0.0024	0.0024
Pepco	9.32	9.05	8.81	8.97	8.91	8.18	0.0020	0.0020	0.0019	0.0020	0.0019	0.0018
PE	18.46	19.49	18.86	19.39	17.17	16.93	0.0034	0.0034	0.0030	0.0029	0.0032	0.0033
Delmarva	13.70	12.60	12.83	13.14	13.02	12.61	0.0032	0.0028	0.0028	0.0028	0.0025	0.0028
SMECO	11.22	10.57	10.47	10.83	10.85	10.61	0.0023	0.0023	0.0022	0.0024	0.0023	0.0022
Choptank	13.70	12.65	12.79	13.06	12.58	12.31	0.0032	0.0027	0.0028	0.0024	0.0032	0.0032
Hagerstown	9.33	9.01	8.67	8.95	8.37	7.93	0.0019	0.0018	0.0017	0.0018	0.0016	0.0016
Easton	20.25	19.23	17.82	18.48	16.59	16.65	0.0045	0.0044	0.0039	0.0041	0.0038	0.0041
Thurmont	15.08	14.53	14.26	14.37	13.73	13.02	0.0027	0.0032	0.0022	0.0032	0.0026	0.0024
Berlin	11.05	10.60	9.93	10.84	9.31	9.40	0.0023	0.0024	0.0023	0.0026	0.0020	0.0024
Williamsport	9.54	8.92	8.37	8.56	9.20	9.44	0.0018	0.0020	0.0015	0.0019	0.0016	0.0016
Somerset	4.22	N/A	N/A	4.48	4.49	N/A	0.0011	N/A	N/A	0.0011	0.0010	N/A
A&N Coop	9.25	11.10	9.52	8.87	8.05	10.83	0.0021	0.0023	N/A	N/A	N/A	N/A

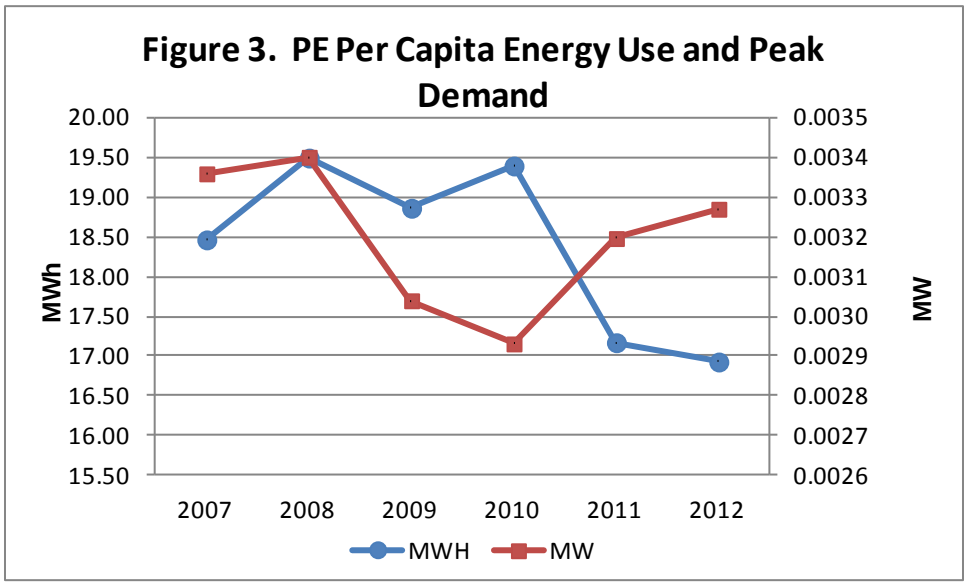
The following five charts provide a graphical representation of Table 30, for the five EmPOWER Maryland Utilities. As has been discussed earlier in this report, the graphs will show how the per capita energy savings value is effected by the weather, as for each utility there is a spike in per capita energy use in 2010, which had a warmer than normal summer and a cooler than normal winter.



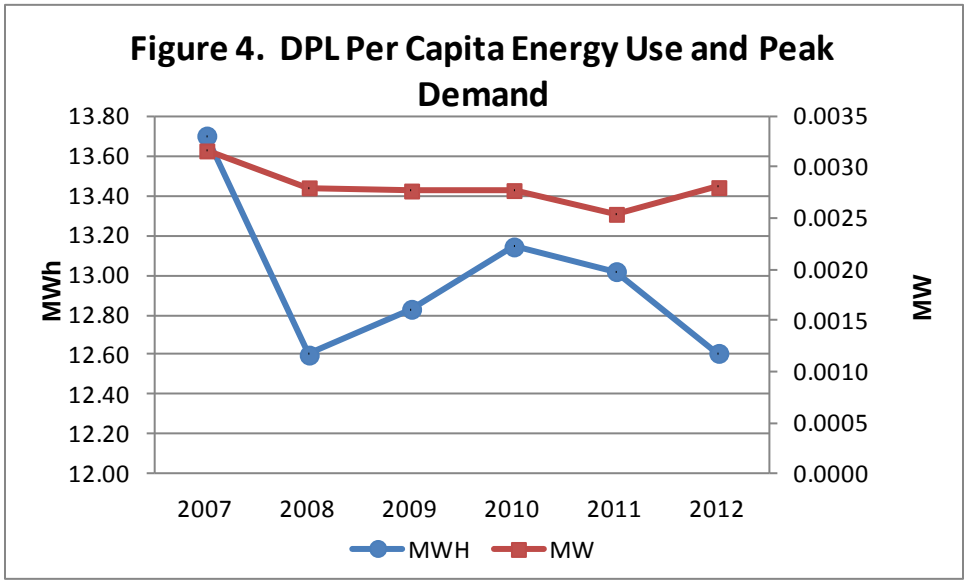
BGE's per capita goal for energy use is 12.07 MWh
BGE's per capita goal for peak demand reduction is 0.0024 MW



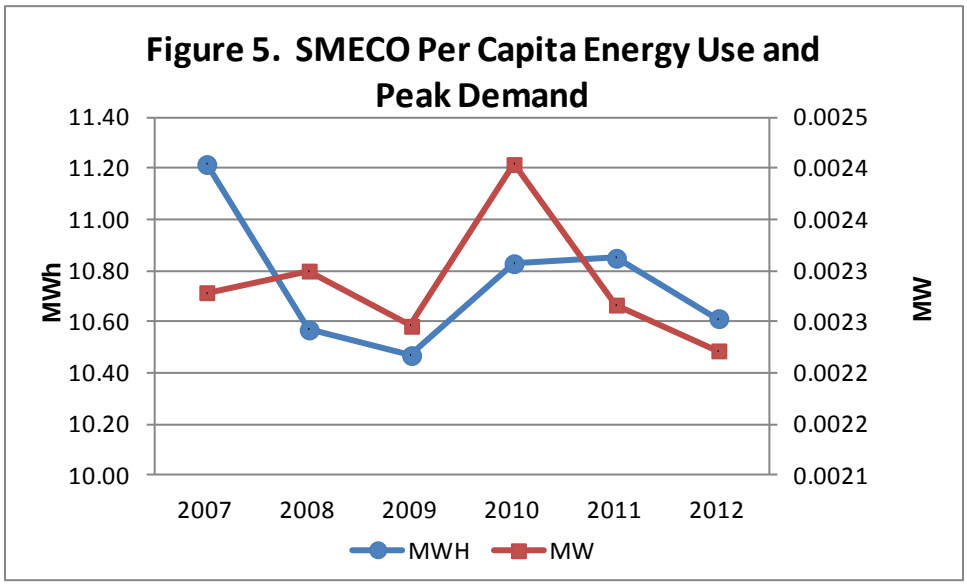
Pepco's per capita goal for energy use is 8.39 MWh
Pepco's per capita goal for peak demand reduction is 0.0017 MW



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 2013.

- Working Group Report – In Order No. 85323, the Commission directed a working group be convened to submit a recommendation by March 23, 2013 as to how to best account for expenditures associated with programs that are not approved by the Commission.

- Financing Programs – The Commission directed the formation of a working group to analyze financial opportunities in greater detail, as well as legislative or regulatory solutions that might overcome barriers to financing programs, while considering among other things, whether changes to the banking or debt collection laws might allow on-bill financing or utility collection of loan payments without turning the utilities into banks, and any other ways the significant streams from EmPOWER surcharges could be used to facilitate financing for customer participation in EmPOWER programs. This workgroup submitted its report on January 30, 2013 and the Commission will take the matter under consideration on March 6, 2013.

- Allocation of EmPOWER Goals – The Commission directed the Staff of the Public Service Commission to convene a work group to discuss this matter. If consensus cannot be reached, the Utilities and/or interested parties can submit the appropriate filing to the Commission to address the matter.

- The New Programs Working Group will continue to meet throughout 2013, to develop new program ideas for EmPOWER Maryland for the Commission to determine if a new program is appropriate for EmPOWER.

- Planning for the 2015-2017 EmPOWER program cycle will begin during the second and third quarters of 2013.

- Determine if allowing customers to opt out of receiving a smart meter is appropriate and if so at what cost, if any, to the opt-out customer.

In addition, the Commission also may consider initiating proceedings in connection with the following:

- Participation of municipal utilities and cooperatives – Per the EmPOWER Maryland Act, "As directed by the Commission, each municipal electric utility and each electric cooperative that serves a population of less than 250,000 in its distribution territory shall include energy efficiency and conservation programs or services as part of their service to their customers."

- Fuel-switching – In Order No. 84569, the Commission directed that work groups be convened or continued, to develop additional programs or program enhancements that would be necessary to meet the EmPOWER Act's 2015 statutory goals. Fuel-switching may be considered as part of the work group process. However, considering that MEA is determining whether gas goals become apart of future EmPOWER Maryland cycles, fuel-

switching proposals have not been brought to the Commission because both electric and gas utilities are hesitant to develop fuel switching programs until natural gas goals are finalized.

Conclusions and Observations

2012 marked the first year of the 2012-2014 EmPOWER cycle and all of the utilities' approved EmPOWER Maryland programs were operational for the entire year. 2012 was the most successful year for the utilities EmPOWER programs to date for energy reductions as the utilities combined to reach 101 percent of the energy reduction targets and increased savings by 36 percent over 2011. Reported energy savings in 2011 (808,621 MWh) comprised over 36 percent of the program-to-date energy savings (2,249,566 MWh). The C&I programs continue to underperform with respect to forecasted participation and energy savings, as the slow recovery from the economic recession in 2008 and 2009 continues to hamper C&I customers from making an investment in energy-efficient upgrades. However, participation and energy savings from the C&I programs improved throughout 2012.

As of December 31, 2012, the utilities' EmPOWER Maryland program energy savings are 41 percent of the 2015 EmPOWER Maryland goal. The reported peak demand reductions account for 51 percent of the 2014 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, 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 and CHP type programs in order to meet the 2015 EmPOWER peak demand reduction goals.

Looking ahead to the remaining two years of the 2012-2014 EmPOWER Maryland plan cycle, the Commission acknowledges that the currently approved programs will fall short of both the energy and peak demand reduction goals for 2015. In order to reach the 2015 statutory goals of a 10 percent reduction in per capita energy usage and 15 percent reduction in per capita peak demand, the Commission has directed the utilities, the Commission Staff, and other interested stakeholders to form working groups that continue to explore and develop new programs or program enhancements to present to the Commission as a part of the EmPOWER Maryland portfolio of programs.