	*	BEFORE THE
	*	PUBLIC SERVICE COMMISSION
	*	OF MARYLAND
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IN THE MATTER OF EMPOWER MARYLAND	*	_____
2018 – 2020 ENERGY EFFICIENCY,	*	
CONSERVATION AND DEMAND RESPONSE	*	CASE NO. 9494
PROGRAM PLANS PURSUANT TO THE	*	_____
EMPOWER MARYLAND ENERGY ACT OF 2008	*	
	*	

EmPOWER Cost Recovery Work Group Report
April 15, 2019

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Introduction

In a Letter Order dated January 15, 2019[1], the Maryland Public Service Commission ("Commission") expressed its interest in exploring cost recovery for all EmPOWER Maryland ("EmPOWER") programs. Specifically, the Commission was interested in minimizing ratepayer impacts over the life of the surcharge while appropriately incentivizing the achievement of the goals of the EmPOWER Act. The Commission directed Staff to file a report on behalf of the Cost Recovery Work Group ("Work Group") by April 15, 2019, that addresses options for the Commission's consideration on how to reform cost recovery of the EmPOWER programs and to inform the 2021-2023 planning process. The Commission invited the Maryland Energy Administration ("MEA") to co-lead the Cost Recovery Work Group jointly with Staff if MEA was interested and available. The report was directed to expand on work already submitted to the Commission in previous filings[2] and include analysis of the following topics:

1. The appropriate rate of return for the EmPOWER programs;
2. The potential surcharge and ratepayer impact of adjusting the amortization period for the entire suite of programs;
3. The potential surcharge and ratepayer impacts of recovering programs through a performance-based cost recovery methodology; and
4. The potential transition plans from the current surcharge structure to another.

The Work Group has consisted of Commission Staff ("Staff"), the Office of People's Counsel ("OPC"), and the EmPOWER Maryland Utilities.[3] The Work Group met on two occasions via conference call on January 30, 2019 and March 7, 2019. As a result of those Work Group meetings, the EmPOWER Utilities and OPC were given homework assignments by the Work Group leader to provide written responses supporting their respective positions. On March 15, 2019, the EmPOWER Utilities provided a written document to the Work Group leader with the combined utility position that was distributed to the Work Group on March 18, 2019. On

[1] Limited Income Program Cost Recovery Report. EmPOWER Maryland 2018-2020. Case No. 9494. (ML # 223596)

[2] See Mail Log No. 217298: Appendices A and B, Mail Log No. 219916: Appendix B, Mail Log No. 223128: Appendix B, and Mail Log No. 223420: pp.8-9.

[3] Baltimore Gas and Electric Company ("BGE"), Potomac Electric Company ("Pepco"), Delmarva Power & light Company ("DPL"), Potomac Edison ("PE"), Southern Maryland Electric Cooperative ("SMECO") and Washington Gas Light Company ("WGL")

April 4, 2019, the EmPOWER Utilities completed a template provided by Staff regarding the surcharge and bill impacts of transitioning to a one-year cost recovery approach.

During the course of the discussions, it became clear to the Work Group leader that this report was not going to be a consensus documents as the parties held different views on the topics outlined, specifically the appropriate rate of return. The purpose of this report is to provide each stakeholders' perspective of the four directives.

Unless otherwise noted, information contained in this report was not discussed by the Work Group and is not a consensus or product of the Work Group members. As such, the EmPOWER Utilities will be providing additional comments as necessary by Friday, April 19, 2019 for full consideration by the Commission in conjunction with this report.

Background of EmPOWER Cost Recovery

By Order No. 81448 issued on June 8, 2007, in Case No. 9111, the Commission established a collaborative process to consider four issues. One of those issues was the recovery of costs of demand side management ("DSM") programs. The DSM Collaborative ("Collaborative") that was created by the Commission included Commission Staff, OPC, MEA, and the utilities. The Commission directed the Collaborative to report back to the Commission by July 6, 2007. On July 6, 2007, Staff filed the "Report of the Advanced Metering Initiatives and Demand Side Management Collaborative."[4] This report addressed the issue of cost recovery for DSM programs. The report noted that the Collaborative agreed that "[e]xpenses associated with DSM programs should be amortized over a five-year period" and that "[a]nnual carrying costs of any unrecovered expenditures should be equal to the company's approved rate of return."[5]

In summary, the Collaborative agreed that DSM investments should be amortized over a five-year period, a conservative proxy for the actual average measured life of over five years. The Collaborative also agreed that annual carrying costs of any unrecovered expenditures should be equal to the individual utility's Commission-approved rate of return. The Collaborative

[4] Report of the Advanced Metering Initiatives and Demand Side Management Collaborative ("Collaborative Report"), ML# 106704.
[5] Collaborative Report at 8.

further acknowledged that this traditional cost recovery approach was consistent with the mechanisms that existed in the 1990s for many utilities in Maryland.

On September 28, 2007, the Commission issued Order No. 81637, which established parameters for all electric companies to develop and file comprehensive energy efficiency, conservation and demand reduction plans designed to achieve usage reduction goals in total electric consumption for each utility by calendar year 2015. This order was in response to the Collaborative established by Order No. 81148. In Order No. 81637, the Commission accepted the recommendation of the Collaborative on cost recovery. The Commission specifically accepted the Collaborative recommendations that expenses associated with conservation and energy efficiency programs should be amortized over a five-year period and annual carrying costs of any unrecovered expenditures should be equal to the company's approved rate of return.[6]

Appropriate Rate of Return

Current Status

In Order No. 81637, issued on September 28, 2007, the Commission accepted the recommendations of the DSM Collaborative that the annual carrying costs of any unrecovered EmPOWER expenditures should be equal to the company's approved rate of return. This is the current status of the rate of return and has not changed since the inception of the program.

Stakeholder Positions

EmPOWER Utilities

2018 marked a decade of EmPOWER Programs and achievement in reducing energy consumption and demand. Since inception, the Commission has recognized the importance of investment in energy efficiency. The Commission reaffirmed this importance when it established the post-2015 EmPOWER goals. The structure of EmPOWER spending being treated as an investment that provides long-term benefits to Maryland, which helps to avoid additional investment in utility infrastructure, is an intrinsic part of the success of the EmPOWER programs; programs which ultimately help Maryland meet its energy needs just like any other energy investment. Consequently, the EmPOWER Utilities continue to invest in comprehensive, best practice energy efficiency programs in new and innovative ways, resulting

[6] Order No. 81637 at 6.

in customers realizing, among other things, the value of energy savings through rebates, bill credits and reduced energy consumption. Throughout the state of Maryland, the value of the savings approximates in excess of $7.6 billion to be enjoyed by customers over the expected lives of the measures installed. Additionally, customers' decisions to pursue energy efficient products and services to reduce their energy usage has generated over $1.2 billion in incentives. In total, that adds up to nearly $10 billion in customer benefits. Additionally, Maryland's EmPOWER programs boost the economy. According to the Northeast Energy Efficiency Partnership, in 2016 Maryland citizens benefited by nearly 47,000 direct jobs in the energy efficiency industry.

The current EmPOWER structure encourages the EmPOWER Utilities to invest in a diverse portfolio of programs that are available to all Maryland customers. Businesses, both large and small, and residential customers, including limited income customers, all have the opportunity to participate in EmPOWER programs to reduce their energy consumption and bills. Energy efficiency programs, in addition to saving customers money, reduce greenhouse gases, reduce the need for new generation resources, and reduce the need for new transmission and distribution capacity. Through December 2018, the annualized energy savings impacts from EmPOWER are almost 8,000,000 MWh, the equivalent of one year's greenhouse gas emission from approximately 1.2 million passenger vehicles not driven for one year or CO^2 emission from 3.1 billion tons of coal not burned. In addition, EmPOWER programs have reduced peak demand by over 2,000 MW.

Customers in Maryland have also benefited from innovation through both pilots and new programs. This innovation increases energy savings, customer engagement and customer satisfaction.

As affirmed over the decade of EmPOWER's existence, the appropriate rate of return for the EmPOWER programs is the individual utility's weighted average cost of capital ("WACC") approved by the Commission in the utility's most recent distribution base rate proceeding. The WACC is appropriate for multiple reasons, primarily because: 1) utilities finance their business as a whole, and not in part; 2) the WACC represents the utility's costs to finance its distribution investments; 3) the WACC ensures that EmPOWER investments (and the savings they produce for customers) are on a level playing field with all other distribution investments; 4) the WACC

used by each Maryland electric distribution company has been determined by the Commission to be a fair rate of return; and 5) the WACC is consistent with industry research[7] that "to incentivize utilities to provide energy efficiency programs for their customers, there should be a reasonable earnings opportunity for the successful implementation of energy efficiency programs. In general, the available incentive should be comparable to the return on investment in supply-side resources such as new generating capacity." And that "a comprehensive policy strategy both setting specific energy efficiency targets and providing opportunities for utilities to earn a return on efficiency investments and collect authorized revenues is most closely associated with achieving high savings."[8]

As with other distribution investments, EmPOWER investments ensure safe and reliable distribution of energy, are funded upfront by utility investors, and are later recovered from customers over the period that they receive the associated benefits. The Utilities' investment in EmPOWER provides distribution system benefits to all customers as well as energy savings and bill reductions to the individual customer participating in one or more EmPOWER programs. While not "hard" assets, EmPOWER investments are regulatory assets whereby cost recovery has appropriately been treated in exactly the same manner as physical distribution plant investments, which as mentioned above is consistent with industry research supporting the need for cost recovery of energy efficiency investments to be treated comparable to other utility investments. Namely, the investor-funded assets are amortized over the estimated life of the benefits and financing costs are recovered at the WACC. To ask customers to pay for these investments over a shorter time period, for example in the same year they are spent, would be asking them to pay for savings and benefits before receiving them.

These economic principles have not changed since the Commission first authorized this cost recovery approach in 2008. The EmPOWER Utilities continue to employ sound utility management practices to minimize financing costs in a responsible manner, which means the utility is financing the entire utility business, with the Commission ultimately authorizing the most appropriate WACC for each individual utility. It is therefore appropriate for customers to reimburse utilities for their actual financing costs - at the WACC and over the amortization period the investments are being recovered.

[7] https://aceee.org/print/sector/state-policy/toolkit/aligning-utility.
[8] *Id*.

Furthermore, by setting the rate of return for the EmPOWER programs at the WACC, the Commission is sending a clear message to utilities that these programs are just as important to serving customers as all other distribution investments. Since 2008, this message has encouraged Maryland utilities to invest in EmPOWER Programs and the results have been impressive, providing customers with nearly $10 billion in EmPOWER benefits. Any change in the authorized rate of return may send a very different message to utilities and suggest to those companies that investor funds might be better spent in other ways.

On September 1, 2017 the EmPOWER Utilities each filed their 2018-2020 EmPOWER Maryland Program filings. Programs were designed to be cost effective so as to be mindful of customer bills under the existing cost recovery process. The filings included bill impacts of the proposed programs through 2020. On December 22, 2017, the Commission authorized the EmPOWER Utilities to transition to their proposed 2018-2020 program cycle.[9] The EmPOWER Utilities developed their programs under this approved cost recovery approach. Should the Commission determine it is appropriate to modify the EmPOWER cost recovery structure, the EmPOWER Utilities suggest that the change should begin with the 2021-2023 program cycle. The utilities further recommend that any change in cost recovery should be carefully considered in order to ensure that such treatment is consistent with industry research supporting utility investments in energy efficiency and achieving high savings.

OPC

EmPOWER programs are funded by ratepayers through the surcharge, and utilities are not required to raise capital from market sources to fund them. In this respect, the EmPOWER surcharge is more akin to fuel adjustment clauses that are a simple pass-through expense than to capital projects for which utilities need to raise capital and then put in the rate base. For this reason, a return on the costs of the EmPOWER program is inappropriate. Like a fuel adjustment clause, the most direct way of treating EmPOWER costs would be to collect expenses for the period in which they are incurred, with an annual true-up.

The utilities' assertion that EmPOWER programs are funded in the same manner as all utility spending was only accurate during the first five years of the EmPOWER program. When EmPOWER programs were started, the initial steep ramp-up of spending required additional investment on the part of the utilities. However, now that EmPOWER programs have been

[9] Order No. 88514 (ML# 218305) at 3.

operational for more than five years, the utilities are recovering the full cost of the program on a yearly basis and are no longer required to seek outside capital to fund the programs. Because ratepayers, and not investors, are currently paying the full cost of the EmPOWER programs, it is not appropriate for ratepayers to continue to pay the expenses associated with outside capital.

In order for the EmPOWER surcharge to meet the statutory requirement that rates be just and reasonable, the rates paid by customers should match the costs incurred by utilities.[10] Because the full cost of capital is not necessary for utility investment at this time, a more accurate reflection of the carrying costs for with respect to amortized EmPOWER funds would be the utilities' actual cost of debt. This would compensate utilities for carrying costs while acknowledging that the utilities are no longer required to raise capital to fund EmPOWER programs and provide a closer alignment between rates paid by customers and the costs incurred by utilities.

OPC participated in the Work Group in Docket Number 9111 that previously a five-year amortization and use of the weighted average cost of capital for demand-side management programs, OPC noted in its separate comments that "OPC does not believe that a consensus was reached for cost recovery for all future DSM programs." OPC continued to assert that it "always reserves the right to object to a particular form of cost recovery for future DSM programs. It would simply not be prudent for any party to agree to a form of cost recovery for a program that no one has even put forward for discussion."[11] OPC believes that the fact that previous demand-side programs were handled in a certain manner is insufficient reason to continue to handle them in the same manner. A previous methodology, while appropriate at its initiation, may eventually result in unjust and unreasonable rates as circumstances change. OPC believes that is what has occurred with the return earned by utilities on the EmPOWER program and urges reconsideration based on the current circumstances.

Staff

The Staff recognizes that the rate of return for the EmPOWER surcharge has been the utilities' WACC and was part of the DSM Collaborative that made this recommendation to the Commission in 2007. One factor to consider is the risk to the utilities of not recovering their

[10] Md. Code Ann., Public Utilities Art. ("PUA") § 4-201.
[11] ML# 106691, at p. 5.

EmPOWER investments. Through the end of 2018, the EmPOWER Utilities have spent over $2.5 billion on EmPOWER programs, including approximately $1.7 billion on energy efficiency and conservation ("EE&C") programs and $749 million on demand response ("DR") programs. During that time frame, the only time the Commission denied cost recovery to any of the EMPOWER utilities was in 2012 when the Commission denied approximately $100,000 of a marketing campaign for Pepco. There is a low risk that the Commission will deny future program cost recovery as budgets are reviewed by the EmPOWER stakeholders during the three-year plan review, on a semi-annual basis and on an annual basis for the EmPOWER surcharge filings. The Commission approves budgets for the three year cycle and approves the EmPOWER surcharge filings, which are based on the approved plan budgets.

The EmPOWER Utilities noted that the 5-year amortization of the program cycle closely matches the average life of the measures offered in the programs. An appropriate rate of return should attempt to match the average life of the measures. One possible rate of return would be to match the average return of a 5-Year Treasury Note, which is 2.45%. This change in the rate of return would reduce the return component in the surcharge, which would reduce the revenue requirement and reduce the EmPOWER surcharge, all other factors being equal.

Impact of a Lower Rate of Return - 2019 Residential EE&C Surcharge									
Utility	Return			Revenue Requirement			Bill Impact		
	WACC	5 Year Treasury	Difference	WACC	5 Year Treasury	Difference	WACC	5 Year Treasury	Difference
BGE	$8,115,846	$ 3,848,840	$4,267,006	$49,322,165	$45,055,159	$4,267,006	$ 3.91	$ 3.57	$ 0.34
Pepco	$3,638,425	$ 1,328,332	$2,310,093	$23,153,612	$20,843,519	$2,310,093	$ 4.29	$ 3.86	$ 0.43
DPL	$1,304,998	$ 514,854	$ 790,144	$ 8,325,208	$ 7,535,064	$ 790,144	$ 3.96	$ 3.58	$ 0.38

Adjusting Amortization Period and Transition Plan

Current Status

In Order No. 81637, issued on September 28, 2007, the Commission accepted the recommendations of the Collaborative that expenses associated with DSM programs should be amortized over a five-year period. This is the current status of the amortization period and has not changed since the inception of the program.

Stakeholder Positions

EmPOWER Utilities

As noted previously, the EmPOWER Utilities' position is that, EmPOWER investments reduce each utility's need to invest capital necessary to ensure safe and reliable distribution of energy. Furthermore, just like a distribution investment, EmPOWER investments are funded upfront by utility investors, and are later recovered from customers over the period that they receive the associated benefits. EmPOWER investments are, and should continue to be, appropriately treated in exactly the same manner as physical distribution plant investments by amortizing investor-funded assets over the estimated life of the benefits so that customers do not pay for savings and benefits before receiving them.

These economic and regulatory principles have not changed since the Commission first authorized this cost recovery approach in 2008. It is therefore appropriate for customers to reimburse utilities for their actual financing costs - at the WACC and over the amortization period the investments are being recovered.

OPC

As noted in Staff's Comments on the utilities' 2018-2020 EmPOWER plans (ML # 217298, at p. 196), Maryland's EmPOWER program is one of very few in the country that amortize energy efficiency spending instead of recovering it on a yearly basis. Because the utilities fully recover EmPOWER costs from customers on a yearly basis with virtually non-existent risk of non-recovery, the return component on the amounts that are amortized are an unnecessary cost for customers. Accordingly, OPC supports eliminating the amortization.

However, OPC is sensitive to the fact that eliminating the amortization will require a short-term increase in the EmPOWER surcharge and believes it should be done with consideration to minimizing bill impact. As demonstrated in Staff's comments below, transitioning to a yearly recovery over a five year period will result in a savings of more than $150 million to ratepayers if the utilities' weighted average cost of capital continues to apply to the amortized balances. This savings is impressive, but OPC remains concerned about the bill impacts to customers, as the monthly EmPOWER surcharge will more than double for the customers of all utilities by 2023.

In order to align customer rates with utility costs, OPC proposes reducing the interest rate paid by customers to the utilities' actual cost of debt while transitioning to a yearly recovery over a five year period in a manner that assures that all balances as well as accrued interest is paid at the end of the five year period. As described above, this is a fair rate of compensation to the utilities at this stage of the EmPOWER program's maturity, and it minimize the rate impact on customers while allowing the transition to yearly recovery.

In order to provide a broad overview of the impact of using the utilities' cost of debt, OPC ran scenarios transitioning to a yearly recovery over a five-year period using an interest rate of 4% as a proxy for the utilities' actual cost of debt. OPC's scenarios also include an accelerated paydown schedule for the outstanding amortization balance. This approach has a greater immediate rate impact, but also comes with greater savings to customers by reducing the carrying costs borne by ratepayers for the outstanding balances. In OPC's scenarios, a set number of years is used to pay down the unamortized balance and the full program cost is covered with no further amortization from the first year on.

The table below shows the monthly bill impacts when the return is reduced from weighted average cost of capital to 4% using the accelerated paydown method recommended by OPC over a five year period.[12]

Customer Impact using OPC Proposal

Year	BGE	DPL	PE	Pepco	SMECO
2019	$5.76	$5.14	$9.64	$5.39	$12.07
2020	$5.65	$5.51	$9.24	$5.39	$10.77
2021	$5.65	$5.69	$9.37	$5.39	$10.79
2022	$5.65	$5.69	$9.38	$5.39	$10.77
2023	$5.65	$5.69	$9.42	$5.39	$10.74

The next table compares the cumulative return paid by customers to the utility when using Staff's proposal, when continuing to use a five year amortization, and when using OPC's recommended accelerated paydown method with a 4%f interest rate over five years. As shown in this table, OPC's approach saves ratepayers a total of $107,416,419 when compared to

[12] OPC has not seen the calculations behind Staff's tables and is unable to provide a detailed explanation of the differences. However, OPC has concerns that the declining amortization methodology method utilized by Staff may result in remaining costs at the end of five years that would result in a balloon payment for customers.

continuing to use a five year amortization and a total of $54,752,437 when compared to Staff's proposal.

Cumulative Return

Utility	Declining Amortization (Staff Proposal)	Continuing use of 5 year amortization (Utility Proposal)	Accelerated Paydown (OPC Proposal)
PE	$24,281,074	$41,409,170	$5,656,803
BGE	$36,568,660	$56,538,876	$14,822,052
Pepco	$16,997,442	$25,645,430	$7,383,948
Delmarva	$5,442,001	$8,502,011	$2,571,591
SMECO	$6,064,499	$9,922,170	$4,166,845

The table on the following page provides a more detailed summary of the bill impact as well as other factors, including the percentage of the surcharge that pays for programming and not the utilities' return, as well as the percentage of an average customers' bill that the surcharge represents.

Bill Impact of Pay-Down Period and Interest Rate (Illustrative Example)
April 12, 2010

Pay-Down Period: 5 Rate of Return: 4%

Utility	Year	Period Year	Unamortized Balance	Pay-Down Period	Unamortized Balance Pay-Down (Principal)	Unamortized Balance Pay-Down (Interest)	Unamortized Balance Pay-Down (Principal + Interest)	Rate of Return	Return	Program Cost	Return as Share of Program Cost	Cumulative Return	Revenue Requirement	Electricity Sales	Surcharge	Average kWh/month	Estimated Monthly bill impact	Estimated Annual bill impact	% of Revenue Spent on In-Year Program	Avg. Res Price ¢/kWh (Est., 2017, EIA	Surcharge as % of Residential Price
PE	2019	1	$ 45,939,631	5	8,481,701	1,837,585	10,319,287	4%	$ 1,837,585	$ 21,349,863	9%	$ 1,837,585	$31,669,150	3,284,043,869	$ 0.009643	1,000	$ 9.64	$ 115.72	67%	11.04256	9%
PE	2020	2	$ 37,457,930	5	8,820,970	1,498,317	10,319,287	4%	$ 1,498,317	$ 19,741,302	8%	$ 3,335,902	$30,060,589	3,252,754,321	$ 0.009242	1,000	$ 9.24	$ 110.90	66%	11.04256	8%
PE	2021	3	$ 28,636,660	5	9,178,808	1,165,678	10,319,287	4%	$ 1,165,678	$ 19,741,302	6%	$ 4,501,581	$30,060,589	3,208,918,515	$ 0.009366	1,000	$ 9.37	$ 112.39	66%	11.04256	8%
PE	2022	4	$ 19,457,852	5	9,540,761	778,526	10,319,287	4%	$ 778,526	$ 19,741,302	4%	$ 5,280,107	$30,060,589	3,203,944,919	$ 0.009382	1,000	$ 9.38	$ 112.59	66%	11.04256	8%
PE	2023	5	$ 9,922,591	5	9,922,591	396,696	10,319,287	4%	$ 396,696	$ 19,741,302	2%	$ 5,676,803	$30,060,589	3,190,956,803	$ 0.009421	1,000	$ 9.42	$ 113.05	66%	11.04256	8%
PE	2024	6	$ -	0	-	-	-	4%	$ -	$ 19,741,302		$ 5,676,803	$19,741,302	3,190,956,803	$ 0.006187	1,000	$ 6.19	$ 74.24	100%	11.04256	6%
PE	2025	7		5	-	-	-	4%	$ -	$ 19,741,302			$19,741,302	3,190,956,803	$ 0.006187	1,000	$ 6.19	$ 74.24	100%	11.04256	6%
PE	2026	8		5	-	-	-	4%	$ -	$ 19,741,302			$19,741,302	3,190,956,803	$ 0.006187	1,000	$ 6.19	$ 74.24	100%	11.04256	6%
PE	2027	9		5	-	-	-	4%	$ -	$ 19,741,302			$19,741,302	3,190,956,803	$ 0.006187	1,000	$ 6.19	$ 74.24	100%	11.04256	6%
PE	2028	10		5	-	-	-	4%	$ -	$ 19,741,302			$19,741,302	3,190,956,803	$ 0.006187	1,000	$ 6.19	$ 74.24	100%	11.04256	6%
PE	2029	11		5	-	-	-	4%	$ -	$ 19,741,302			$19,741,302	3,190,956,803	$ 0.006187	1,000	$ 6.19	$ 74.24	100%	11.04256	6%
BGE	2019	1	$ 120,271,020	5	22,223,902	4,014,672	27,038,774	4%	$ 4,014,672	$ 31,619,213	9%	$ 4,014,672	$76,657,990	12,625,472,000	$ 0.006230	925	$ 5.76	$ 69.15	60%	14.11972	4%
BGE	2020	2	$ 98,147,940	5	23,112,858	3,925,917	27,038,774	4%	$ 3,925,917	$ 30,048,969	8%	$ 8,740,790	$77,087,744	12,625,473,000	$ 0.006106	925	$ 5.65	$ 67.77	59%	14.11972	4%
BGE	2021	3	$ 75,033,061	5	24,037,372	3,001,402	27,038,774	4%	$ 3,001,402	$ 30,048,969	6%	$ 11,742,192	$77,087,744	12,625,473,000	$ 0.006106	925	$ 5.65	$ 67.77	63%	14.11972	4%
BGE	2022	4	$ 50,997,685	5	24,996,867	2,039,908	27,038,774	4%	$ 2,039,908	$ 30,048,969	4%	$ 13,782,099	$77,087,744	12,622,473,000	$ 0.006106	925	$ 5.65	$ 67.77	63%	14.11972	4%
BGE	2023	5	$ 25,998,822	5	25,998,822	1,039,953	27,038,774	4%	$ 1,039,953	$ 30,048,969	2%	$ 14,822,052	$77,087,744	12,625,473,000	$ 0.006106	925	$ 5.65	$ 67.77	63%	14.11972	4%
BGE	2024	6	$ (0)	0	-	-	-	4%	$ -	$ 30,048,969		$ 14,822,052	$30,048,969	12,625,473,000	$ 0.003964	925	$ 3.67	$ 44.00	100%	14.11972	3%
BGE	2025	7		5	-	-	-	4%	$ -	$ 30,048,969			$30,048,969	12,625,473,000	$ 0.003964	925	$ 3.67	$ 44.00	100%	14.11972	3%
BGE	2026	8		5	-	-	-	4%	$ -	$ 30,048,969			$30,048,969	12,625,473,000	$ 0.003964	925	$ 3.67	$ 44.00	100%	14.11972	3%
BGE	2027	9		5	-	-	-	4%	$ -	$ 30,048,969			$30,048,969	12,625,473,000	$ 0.003964	925	$ 3.67	$ 44.00	100%	14.11972	3%
BGE	2028	10		5	-	-	-	4%	$ -	$ 30,048,969			$30,048,969	12,625,473,000	$ 0.003964	925	$ 3.67	$ 44.00	100%	14.11972	3%
BGE	2029	11		5	-	-	-	4%	$ -	$ 30,048,969			$30,048,969	12,625,472,000	$ 0.003964	925	$ 3.67	$ 44.00	100%	14.11972	3%
Pepco	2019	1	$ 59,966,002	5	11,071,530	2,356,640	13,469,990	4%	$ 2,356,640	$ 22,398,581	11%	$ 2,356,640	$33,868,521	5,401,967,699	$ 0.006640	812	$ 5.39	$ 64.70	62%	14.66666	3%
Pepco	2020	2	$ 48,894,652	5	11,514,204	1,955,786	13,469,990	4%	$ 1,955,786	$ 22,398,581	9%	$ 4,354,426	$33,868,521	5,401,967,699	$ 0.006640	812	$ 5.39	$ 64.70	62%	14.66666	3%
Pepco	2021	3	$ 37,380,448	5	11,974,772	1,495,218	13,469,990	4%	$ 1,495,218	$ 22,398,581	7%	$ 5,849,644	$33,868,521	5,401,967,699	$ 0.006640	812	$ 5.39	$ 64.70	62%	14.66666	3%
Pepco	2022	4	$ 25,405,676	5	12,453,763	1,016,227	13,469,990	4%	$ 1,016,227	$ 22,398,581	5%	$ 6,865,871	$33,868,521	5,401,967,699	$ 0.006640	812	$ 5.39	$ 64.70	62%	14.66666	3%
Pepco	2023	5	$ 12,951,913	5	12,951,913	518,077	13,469,990	4%	$ 518,077	$ 22,398,581	2%	$ 7,383,948	$33,868,521	5,401,967,699	$ 0.006640	812	$ 5.39	$ 64.70	62%	14.66666	3%
Pepco	2024	6	$ (0)	0	-	-	-	4%	$ -	$ 22,398,581		$ 7,383,948	$22,398,581	5,401,967,699	$ 0.004146	812	$ 3.37	$ 40.40	100%	14.66666	3%
Pepco	2025	7		5	-	-	-	4%	$ -	$ 22,398,581			$22,398,581	5,401,967,699	$ 0.004146	812	$ 3.37	$ 40.40	100%	14.66666	3%
Pepco	2026	8		5	-	-	-	4%	$ -	$ 22,398,581			$22,398,581	5,401,967,699	$ 0.004146	812	$ 3.37	$ 40.40	100%	14.66666	3%
Pepco	2027	9		5	-	-	-	4%	$ -	$ 22,398,581			$22,398,581	5,401,967,699	$ 0.004146	812	$ 3.37	$ 40.40	100%	14.66666	3%
Pepco	2028	10		5	-	-	-	4%	$ -	$ 22,398,581			$22,398,581	5,401,967,699	$ 0.004146	812	$ 3.37	$ 40.40	100%	14.66666	3%
Pepco	2029	11		5	-	-	-	4%	$ -	$ 22,398,581			$22,398,581	5,401,967,699	$ 0.004146	812	$ 3.37	$ 40.40	100%	14.66666	3%
Delmarva	2019	1	$ 20,884,227	5	3,855,795	835,369	4,691,164	4%	$ 835,369	$ 6,595,582	13%	$ 835,369	$11,286,746	2,150,976,173	$ 0.005247	980	$ 5.14	$ 61.71	58%	14.5397	4%
Delmarva	2020	2	$ 17,028,432	5	4,010,026	681,137	4,691,164	4%	$ 681,137	$ 7,407,804	9%	$ 1,516,506	$12,098,967	2,150,976,173	$ 0.005625	980	$ 5.51	$ 66.15	61%	14.5397	4%
Delmarva	2021	3	$ 13,018,406	5	4,170,427	520,736	4,691,164	4%	$ 520,736	$ 7,808,179	7%	$ 2,037,243	$12,499,343	2,150,976,173	$ 0.005811	980	$ 5.69	$ 68.34	62%	14.5397	4%
Delmarva	2022	4	$ 8,847,979	5	4,337,244	353,919	4,691,164	4%	$ 353,919	$ 7,808,179	5%	$ 2,391,162	$12,499,343	2,150,976,173	$ 0.005811	980	$ 5.69	$ 68.34	62%	14.5397	4%
Delmarva	2023	5	$ 4,510,734	5	4,510,734	180,429	4,691,164	4%	$ 180,429	$ 7,808,179	2%	$ 2,571,591	$12,499,343	2,150,976,173	$ 0.005811	980	$ 5.69	$ 68.34	62%	14.5397	4%
Delmarva	2024	6	$ (0)	0	-	-	-	4%	$ -	$ 7,808,179		$ 2,571,591	$ 7,808,179	2,150,976,173	$ 0.003630	980	$ 3.56	$ 42.69	100%	14.5397	3%
Delmarva	2025	7		5	-	-	-	4%	$ -	$ 7,808,179			$ 7,808,179	2,150,976,173	$ 0.003630	980	$ 3.56	$ 42.69	100%	14.5397	3%
Delmarva	2026	8		5	-	-	-	4%	$ -	$ 7,808,179			$ 7,808,179	2,150,976,173	$ 0.003630	980	$ 3.56	$ 42.69	100%	14.5397	3%
Delmarva	2027	9		5	-	-	-	4%	$ -	$ 7,808,179			$ 7,808,179	2,150,976,173	$ 0.003630	980	$ 3.56	$ 42.69	100%	14.5397	3%
Delmarva	2028	10		5	-	-	-	4%	$ -	$ 7,808,179			$ 7,808,179	2,150,976,173	$ 0.003630	980	$ 3.56	$ 42.69	100%	14.5397	3%
Delmarva	2029	11		5	-	-	-	4%	$ -	$ 7,808,179			$ 7,808,179	2,150,976,173	$ 0.003630	980	$ 3.56	$ 42.69	100%	14.5397	3%
SMECO	2019	1	$ 33,839,489	5	6,247,687	1,353,580	7,601,267	4%	$ 1,353,580	$ 14,342,216	9%	$ 1,353,580	$21,943,483	2,181,765,173	$ 0.010058	1,200	$ 12.07	$ 144.83	65%	12.90242	8%
SMECO	2020	2	$ 27,591,802	5	6,497,595	1,103,672	7,601,267	4%	$ 1,103,672	$ 12,041,908	8%	$ 2,457,252	$19,643,175	2,189,297,171	$ 0.008972	1,200	$ 10.77	$ 129.20	61%	12.90242	7%
SMECO	2021	3	$ 21,094,207	5	6,737,099	863,768	7,601,267	4%	$ 863,768	$ 12,041,908	7%	$ 3,321,020	$19,643,175	2,185,355,510	$ 0.008989	1,200	$ 10.79	$ 129.46	61%	12.90242	7%
SMECO	2022	4	$ 14,226,709	5	7,027,799	573,468	7,601,267	4%	$ 573,468	$ 12,041,908	5%	$ 3,894,488	$19,643,175	2,180,846,874	$ 0.009074	1,200	$ 10.77	$ 129.23	61%	12.90242	7%
SMECO	2023	5	$ 7,308,910	5	7,308,910	292,356	7,601,267	4%	$ 292,356	$ 12,041,908	2%	$ 4,186,843	$19,643,173	2,194,107,662	$ 0.008952	1,200	$ 10.74	$ 128.91	61%	12.90242	7%
SMECO	2024	6	$ (0)	0	-	-	-	4%	$ -	$ 12,041,908		$ 4,186,843	$12,041,908	2,200,854,043	$ 0.005471	1,200	$ 6.57	$ 78.75	100%	12.90242	4%
SMECO	2025	7		5	-	-	-	4%	$ -	$ 12,041,908			$12,041,908	2,208,240,209	$ 0.005452	1,200	$ 6.54	$ 78.51	100%	12.90242	4%
SMECO	2026	8		5	-	-	-	4%	$ -	$ 12,041,908			$12,041,908	2,230,297,534	$ 0.005399	1,200	$ 6.48	$ 77.75	100%	12.90242	4%
SMECO	2027	9		5	-	-	-	4%	$ -	$ 12,041,908			$12,041,908	2,253,981,979	$ 0.005343	1,200	$ 6.41	$ 76.93	100%	12.90242	4%
SMECO	2028	10		5	-	-	-	4%	$ -	$ 12,041,908			$12,041,908	2,253,981,979	$ 0.005343	1,200	$ 6.41	$ 76.93	100%	12.90242	4%
SMECO	2029	11		5	-	-	-	4%	$ -	$ 12,041,908			$12,041,908	2,253,981,979	$ 0.005343	1,200	$ 6.41	$ 76.93	100%	12.90242	4%

As these tables demonstrate, the total savings to customers is substantial. Additionally, while the customer surcharge increases over the five-year period, that increase is less significant than if the weighted average cost of capital continued to apply. The combination of interest rate reduction with a transition to a yearly recovery balances the short-term impact of the transition with the long-term savings that customers will realize by no longer paying a return on EmPOWER programs.

Because OPC and Staff differ in the methodology for eliminating the amortization period and OPC has not had the opportunity to examine Staff's methodology, OPC recommends that the Commission give the Work Group guidance as to the Commission's position on eliminating the amortization period and what interest rate to apply. A more specific directive from the Commission will allow the parties to ensure that they have received and are applying the correct data from the utilities as well as determining the best methodology for achieving the elimination of the amortization and associated costs.

Staff

Staff recognizes that the EmPOWER program expenses are recovered over a five year period and was part of the DSM Collaborative that made this recommendation to the Commission in 2007. However, as Staff has mentioned in previous filings, Maryland's five-year amortization construct is unique compared to other states recovery methodologies for their energy efficiency investments. Staff's research indicates that a majority of surcharges are calculated by expensing the cost over one year and dividing the costs by a sales volume. The benefit of expensing energy efficiency programs is quick recovery of cost for the utility and lower carrying costs, return costs, and/or interest cost for customers.

Due to the large amount of unamortized program costs that have yet to be collected, Staff does not recommend immediately moving the recovery of EmPOWER program costs to an expensing methodology. Staff proposes a more gradual progression to the expensing methodology over the next several program years. The proposal is illustrated in the following table but would reduce the amortization of program cost by one-year until program costs are expensed in 2023, the last year of the next EmPOWER program cycle.

Declining Amortization Schedule					
Program Year	**2019 5 Year Amortization**	**2020 4 Year Amortization**	**2021 3 Year Amortization**	**2022 2 Year Amortization**	**2023 1 Year Amortization**
2019	Year 1	Year 2	Year 3	Year 4	Year 5
2020		Year 1	Year 2	Year 3	Year 4
2021			Year 1	Year 2	Year 3
2022				Year 1	Year 2
2023					Year 1

Staff requested that the EmPOWER Utilities to complete a template on surcharge and bill impacts comparing the Declining Amortization Schedule and a 5-Year Amortization Schedule.

The responses are provided in the following series of tables. The analysis was restricted to Residential EE&C costs, but similar magnitudes of change may be experienced for the Commercial and Industrial ("C&I") programs and for the Residential DR programs. One assumption that Staff requested for the comparison is that programs end after 2023 to see the effect of collecting the unamortized program costs beyond the conclusion of the program.

BGE - Residential Electric EE
Comparison of Estimated Surcharges/Customer Bill Impact
5 Year Amortization

Year	Program Cost	Amortization	Unamortized Balance	Return	Wholesale Revenue (1)	True-up (1)	Revenue Requirement	Electricity Sales	Surcharge	Average kWh/month	Estimated Monthly bill impact	Estimated Annual bill impact
2019 (5 Year Amortization)	$ 51,619,215	$ 47,393,115	$ 120,371,820	$ 8,115,846	$ (2,150,920)	$ (4,035,876)	$ 49,322,165	12,625,473,000	$ 0.003907	925	$ 3.61	$ 43.36
2020 (5 Year Amortization)	$ 50,048,969	$ 48,752,524	$ 122,325,644	$ 8,350,469	$ -	$ -	$ 57,102,993	12,625,473,000	$ 0.004523	925	$ 4.18	$ 50.20
2021 (5 Year Amortization)	$ 50,048,969	$ 49,835,893	$ 123,631,971	$ 8,477,035	$ -	$ -	$ 58,312,928	12,625,473,000	$ 0.004619	925	$ 4.27	$ 51.27
2022 (5 Year Amortization)	$ 50,048,969	$ 50,563,472	$ 124,226,679	$ 8,542,555	$ -	$ -	$ 59,106,027	12,625,473,000	$ 0.004681	925	$ 4.33	$ 51.96
2023 (5 Year Amortization)	$ 50,048,969	$ 51,251,419	$ 124,148,532	$ 8,560,358	$ -	$ -	$ 59,811,777	12,625,473,000	$ 0.004737	925	$ 4.38	$ 52.59
2024	$ -	$ 45,865,372	$ 79,289,309	$ 7,011,572	$ -	$ -	$ 52,876,944	12,625,473,000	$ 0.004188	925	$ 3.87	$ 46.49
2025	$ -	$ 35,618,378	$ 44,452,291	$ 4,264,807	$ -	$ -	$ 39,883,185	12,625,473,000	$ 0.003159	925	$ 2.92	$ 35.06
2026	$ -	$ 25,384,074	$ 19,625,067	$ 2,208,454	$ -	$ -	$ 27,592,528	12,625,473,000	$ 0.002185	925	$ 2.02	$ 24.26
2027	$ -	$ 15,149,771	$ 4,807,637	$ 842,084	$ -	$ -	$ 15,991,855	12,625,473,000	$ 0.001267	925	$ 1.17	$ 14.06
2028	$ -	$ 4,915,468	$ -	$ 165,697	$ -	$ -	$ 5,081,165	12,625,473,000	$ 0.000402	925	$ 0.37	$ 4.47

(1) For purposes of this template and as agreed by Staff, wholesale revenues and true-ups are not included in the years 2020-2023.

Note: In the above calculation, Years 2024 – 2028 forecast the estimated rate if there were no additional EmPOWER programs expenditures after 2023.
While this complies with Staff's request, the company does not believe this accurately represents the ongoing impact to customers as the EmPOWER program is anticipated to continue beyond 2023.

BGE - Residential Electric EE
Comparison of Estimated Surcharges/Customer Bill Impact
Declining Amortization

Year	Program Cost	Amortization	Unamortized Balance	Return	Wholesale Revenue (1)	True-up (1)	Revenue Requirement	Electricity Sales	Surcharge	Average kWh/month	Estimated Monthly bill impact	Estimated Annual bill impact
2019 (5 Year Amortization)	$ 51,619,215	$ 47,393,115	$ 120,371,820	$ 8,115,846	$ (2,150,920)	$ (4,035,876)	$ 49,322,165	12,625,473,000	$ 0.003907	925	$ 3.61	$ 43.36
2020 (4 Year Amortization)	$ 50,048,969	$ 50,082,233	$ 121,025,105	$ 8,305,645	$ -	$ -	$ 58,387,878	12,625,473,000	$ 0.004625	925	$ 4.28	$ 51.33
2021 (3 Year Amortization)	$ 50,048,969	$ 55,940,360	$ 116,360,878	$ 8,181,610	$ -	$ -	$ 64,121,970	12,625,473,000	$ 0.005079	925	$ 4.70	$ 56.37
2022 (2 Year Amortization)	$ 50,048,969	$ 67,923,172	$ 99,976,706	$ 7,456,168	$ -	$ -	$ 75,379,340	12,625,473,000	$ 0.005970	925	$ 5.52	$ 66.27
2023 (Expensed)	$ 50,048,969	$ 70,665,483	$ 30,861,412	$ 4,509,392	$ -	$ -	$ 126,346,394	12,625,473,000	$ 0.010007	925	$ 9.26	$ 111.08

(1) For purposes of this template and as agreed by Staff, wholesale revenues and true-ups are not included in the years 2020-2023.

PEPCO - Residential EE
Comparison of Estimated Surcharges/Customer Bill Impact
5 Year Amortization

Year	Program Cost	Amortization	Unamortized Balance	Return	Federal Tax Credit (1)	True-up (2)	Wholesale Revenue (2)	Revenue Requirement	Electricity Sales	Surcharge	Average kWh/month	Estimated Monthly bill impact	Estimated Annual bill impact
2019 (5 Year Amortization)	$ 22,398,531	$ 26,954,107	$ 59,966,002	$ 4,177,728	$ (2,503,714)	$ (4,527,301)	$ (947,124)	$ 23,153,696	5,401,967,699	$0.004286	812	$ 3.48	$ 41.76
2020 (5 Year Amortization)	$ 22,398,531	$ 24,756,307	$ 57,608,226	$ 3,945,720	$ (2,503,714)	$ -	$ -	$ 26,198,313	5,401,967,699	$0.004850	812	$ 3.94	$ 47.26
2021 (5 Year Amortization)	$ 22,398,531	$ 23,739,567	$ 56,267,190	$ 3,821,590	$ (2,503,714)	$ -	$ -	$ 25,057,443	5,401,967,699	$0.004639	812	$ 3.77	$ 45.20
2022 (5 Year Amortization)	$ 22,398,531	$ 23,069,888	$ 55,595,833	$ 3,754,056	$ (2,503,714)	$ -	$ -	$ 24,320,229	5,401,967,699	$0.004502	812	$ 3.66	$ 43.87
2023 (5 Year Amortization)	$ 22,398,531	$ 22,931,309	$ 55,063,055	$ 3,713,646	$ -	$ -	$ -	$ 26,644,955	5,401,967,699	$0.004932	812	$ 4.01	$ 48.06
2024	$ -	$ 19,972,023	$ 35,091,032	$ 3,025,517	$ -	$ -	$ -	$ 22,997,540	5,401,967,699	$0.004257	812	$ 3.46	$ 41.48
2025	$ -	$ 15,492,317	$ 19,598,715	$ 1,835,355	$ -	$ -	$ -	$ 17,327,672	5,401,967,699	$0.003208	812	$ 2.60	$ 31.26
2026	$ -	$ 11,012,611	$ 8,586,104	$ 945,866	$ -	$ -	$ -	$ 11,958,477	5,401,967,699	$0.002214	812	$ 1.80	$ 21.57
2027	$ -	$ 6,532,905	$ 2,053,199	$ 357,049	$ -	$ -	$ -	$ 6,889,954	5,401,967,699	$0.001275	812	$ 1.04	$ 12.43
2028	$ -	$ 2,053,199	$ -	$ 68,904	$ -	$ -	$ -	$ 2,122,103	5,401,967,699	$0.000393	812	$ 0.32	$ 3.83

(1) Represents the impact of the 2018 Federal Tax Law change and the related excess accumulated deferred income taxes (ie ADIT) that are being amortized over a 5 year period (starting in 2018).
(2) For purposes of this template and as agreed by Staff, wholesale revenues and true-ups are not included in the years 2020-2023.

Note: In the above calculation, Years 2024 – 2028 forecast the estimated rate if there were no additional EmPOWER programs expenditures after 2023.
While this complies with Staff's request, the company does not believe this accurately represents the ongoing impact to customers as the EmPOWER program is anticipated to continue beyond 2023.

PEPCO - Residential EE
Comparison of Estimated Surcharges/Customer Bill Impact
Declining Amortization

Year	Program Cost	Amortization	Unamortized Balance	Return	Federal Tax Credit (1)	True-up (2)	Wholesale Revenue (2)	Revenue Requirement	Electricity Sales	Surcharge	Average kWh/month	Estimated Monthly bill impact	Estimated Annual bill impact
2019 (5 Year Amortization)	$ 22,398,531	$ 26,954,107	$ 59,966,002	$ 4,177,728	$ (2,503,714)	$ (4,527,301)	$ (947,124)	$ 23,153,696	5,401,967,699	$0.004286	812	$ 3.48	$ 41.76
2020 (4 Year Amortization)	$ 22,398,531	$ 25,362,934	$ 57,001,599	$ 3,925,362	$ (2,503,714)	$ -	$ -	$ 26,784,582	5,401,967,699	$0.004958	812	$ 4.03	$ 48.31
2021 (3 Year Amortization)	$ 22,398,531	$ 26,477,165	$ 52,922,965	$ 3,689,002	$ (2,503,714)	$ -	$ -	$ 27,662,453	5,401,967,699	$0.005121	812	$ 4.16	$ 49.90
2022 (2 Year Amortization)	$ 22,398,531	$ 30,816,047	$ 44,505,449	$ 3,269,639	$ (2,503,714)	$ -	$ -	$ 31,581,972	5,401,967,699	$0.005846	812	$ 4.75	$ 56.97
2023 (Expensed)	$ 22,398,531	$ 31,330,758	$ 13,174,692	$ 1,935,711	$ -	$ -	$ -	$ 55,665,000	5,401,967,699	$0.010305	812	$ 8.37	$ 100.41

(1) Represents the impact of the 2018 Federal Tax Law change and the related excess accumulated deferred income taxes (ie ADIT) that are being amortized over a 5 year period (starting in 2018).
(2) For purposes of this template and as agreed by Staff, wholesale revenues and true-ups are not included in the years 2020-2023.

Delmarva Power - Residential EE
Comparison of Estimated Surcharges/Customer Bill Impact
5 Year Amortization

Year	Program Cost	Amortization	Unamortized Balance	Return	Federal Tax Credit (1)	True-up (2)	Wholesale Revenue (2)	Revenue Requirement	Electricity Sales	Surcharge	Average kWh/month	Estimated Monthly bill impact	Estimated Annual bill impact
2019 (5 Year Amortization)	$ 6,595,582	$ 9,872,960	$ 20,884,227	$ 1,392,340	$ (899,335)	$ (2,122,822)	$ (263,201)	$ 7,979,942	2,150,976,173	$0.003710	980	$ 3.64	$ 43.63
2020 (5 Year Amortization)	$ 7,407,804	$ 8,865,989	$ 19,620,535	$ 1,258,027	$ (899,335)	$ -		$ 9,224,681	2,150,976,173	$0.004289	980	$ 4.20	$ 50.43
2021 (5 Year Amortization)	$ 7,808,179	$ 8,443,781	$ 19,170,165	$ 1,204,791	$ (899,335)	$ -		$ 8,749,237	2,150,976,173	$0.004068	980	$ 3.99	$ 47.83
2022 (5 Year Amortization)	$ 7,808,179	$ 8,294,513	$ 18,865,787	$ 1,181,349	$ (899,335)	$ -		$ 8,576,527	2,150,976,173	$0.003987	980	$ 3.91	$ 46.89
2023 (5 Year Amortization)	$ 7,808,179	$ 7,858,885	$ 18,987,481	$ 1,175,675	$ -	$ -		$ 9,034,560	2,150,976,173	$0.004200	980	$ 4.12	$ 49.39
2024	$ -	$ 6,922,931	$ 12,216,418	$ 969,154	$ -	$ -		$ 7,892,085	2,150,976,173	$0.003669	980	$ 3.60	$ 43.15
2025	$ -	$ 5,505,025	$ 6,832,157	$ 591,625	$ -	$ -		$ 6,096,650	2,150,976,173	$0.002834	980	$ 2.78	$ 33.33
2026	$ -	$ 3,925,127	$ 2,993,135	$ 591,625	$ -	$ -		$ 4,516,752	2,150,976,173	$0.002100	980	$ 2.06	$ 24.69
2027	$ -	$ 2,328,465	$ 715,750	$ 115,193	$ -	$ -		$ 2,443,658	2,150,976,173	$0.001136	980	$ 1.11	$ 13.36
2028	$ -	$ 731,803	$ -	$ 22,230	$ -	$ -		$ 754,033	2,150,976,173	$0.000351	980	$ 0.34	$ 4.12

(1) Represents the impact of the 2018 Federal Tax Law change and the related excess accumulated deferred income taxes (ie ADIT) that are being amortized over a 5 year period (starting in 2018).
(2) For purposes of this template and as agreed by Staff, wholesale revenues and true-ups are not included in the years 2020-2023.

Note: In the above calculation, Years 2024 – 2028 forecast the estimated rate if there were no additional EmPOWER programs expenditures after 2023.
While this complies with Staff's request, the company does not believe this accurately represents the ongoing impact to customers as the EmPOWER program is anticipated to continue beyond 2023.

Delmarva Power - Residential EE
Comparison of Estimated Surcharges/Customer Bill Impact
Declining Amortization

Year	Program Cost	Amortization	Unamortized Balance	Return	Federal Tax Credit (1)	True-up (2)	Wholesale Revenue (2)	Revenue Requirement	Electricity Sales	Surcharge	Average kWh/month	Estimated Monthly bill impact	Estimated Annual bill impact
2019 (5 Year Amortization)	$ 6,595,582	$ 9,872,960	$ 20,884,227	$ 1,392,340	$ (899,335)	$ (2,122,822)	$ (263,201)	$ 7,979,942	2,150,976,173	$0.003710	980	$ 3.64	$ 43.63
2020 (4 Year Amortization)	$ 7,407,804	$ 9,065,926	$ 19,424,984	$ 1,251,954	$ (899,335)	$ -		$ 9,418,545	2,150,976,173	$0.004379	980	$ 4.29	$ 51.49
2021 (3 Year Amortization)	$ 7,808,179	$ 9,399,051	$ 18,040,299	$ 1,163,625	$ (899,335)	$ -		$ 9,663,341	2,150,976,173	$0.004493	980	$ 4.40	$ 52.83
2022 (2 Year Amortization)	$ 7,808,179	$ 11,034,940	$ 15,055,612	$ 1,027,918	$ (899,335)	$ -		$ 11,163,523	2,150,976,173	$0.005190	980	$ 5.09	$ 61.03
2023 (Expensed)	$ 7,808,179	$ 10,832,158	$ 4,461,078	$ 606,164	$ -	$ -		$ 19,289,092	2,150,976,173	$0.008968	980	$ 8.79	$ 105.46

(1) Represents the impact of the 2018 Federal Tax Law change and the related excess accumulated deferred income taxes (ie ADIT) that are being amortized over a 5 year period.
(2) For purposes of this template and as agreed by Staff, wholesale revenues and true-ups are not included in the years 2020-2023.

PE - Residential Electric EE
Comparison of Estimated Surcharges/Customer Bill Impact
5 Year Amortization

Year	Program Cost	Amortization	Unamortized Balance	Return	Wholesale Revenue (1)	True-up (1)	Revenue Requirement	Electricity Sales	Surcharge	Average kWh/month	Estimated Monthly bill impact	Estimated Annual bill impact
2019 (5 Year Amortization)	$21,349,863	$15,586,875	$45,939,631	$5,239,192	$ -	$(1,782,939)	$ 19,043,128	3,284,043,869	$0.005799	1,000	$ 5.80	$ 69.58
2020 (5 Year Amortization)	$19,741,302	$16,253,895	$51,968,728	$5,769,369	$ -	$ -	$ 22,023,263	3,252,754,321	$0.006771	1,000	$ 6.77	$ 81.25
2021 (5 Year Amortization)	$19,741,302	$17,563,733	$55,686,134	$6,108,302	$ -	$ -	$ 23,672,035	3,209,518,515	$0.007376	1,000	$ 7.38	$ 88.51
2022 (5 Year Amortization)	$19,741,302	$18,678,019	$58,115,001	$6,310,228	$ -	$ -	$ 24,988,247	3,203,944,919	$0.007799	1,000	$ 7.80	$ 93.59
2023 (5 Year Amortization)	$19,741,302	$19,630,968	$59,449,597	$6,384,029	$ -	$ -	$ 26,014,998	3,190,956,803	$0.008153	1,000	$ 8.15	$ 97.83
2024	$ -	$20,082,343	$59,545,619	$5,301,901	$ -	$ -	$ 25,384,244	3,190,956,803	$0.007955	1,000	$ 7.96	$ 95.46
2025	$ -	$16,071,602	$39,482,604	$3,373,398	$ -	$ -	$ 19,445,000	3,190,956,803	$0.006094	1,000	$ 6.09	$ 73.13
2026	$ -	$12,068,083	$23,689,563	$1,888,845	$ -	$ -	$ 13,956,928	3,190,956,803	$0.004374	1,000	$ 4.37	$ 52.49
2027	$ -	$ 8,054,977	$11,844,781	$ 831,759	$ -	$ -	$ 8,886,736	3,190,956,803	$0.002785	1,000	$ 2.78	$ 33.42
2028	$ -	$ 4,032,282	$ 3,948,260	$ 202,146	$ -	$ -	$ 4,234,429	3,190,956,803	$0.001327	1,000	$ 1.33	$ 15.92

(1) For purposes of this template and as agreed by Staff, wholesale revenues and true-ups are not included in the years 2020-2023.

Note: In the above calculation, Years 2024 – 2028 forecast the estimated rate if there were no additional EmPOWER programs expenditures after 2023.
While this complies with Staff's request, the company does not believe this accurately represents the ongoing impact to customers as the EmPOWER program is anticipated to continue beyond 2023.

PE - Residential Electric EE
Comparison of Estimated Surcharges/Customer Bill Impact
Declining Amortization

Year	Program Cost	Amortization	Unamortized Balance	Return	Wholesale Revenue (1)	True-up (1)	Revenue Requirement	Electricity Sales	Surcharge	Average kWh/month	Estimated Monthly bill impact	Estimated Annual bill impact
2019 (5 Year Amortization)	$ 21,349,863	$ 15,586,875	$45,939,631	$ 5,239,192	$ -	$(1,782,939)	$ 19,043,128	3,284,043,869	$0.005799	1,000	$ 5.80	$ 69.58
2020 (4 Year Amortization)	$ 19,741,302	$ 22,375,066	$71,710,030	$ 6,495,431	$ -	$ -	$ 28,870,497	3,252,754,321	$0.008876	1,000	$ 8.88	$ 106.51
2021 (3 Year Amortization)	$ 19,741,302	$ 26,394,061	$69,424,618	$ 6,034,229	$ -	$ -	$ 32,428,290	3,209,518,515	$0.010104	1,000	$ 10.10	$ 121.25
2022 (2 Year Amortization)	$ 19,741,302	$ 33,592,120	$63,218,492	$ 4,963,272	$ -	$ -	$ 38,555,393	3,203,944,919	$0.012034	1,000	$ 12.03	$ 144.40
2023 (1 Year Amortization)	$ 19,741,302	$ 51,082,319	$49,995,705	$ 1,548,949	$ -	$ -	$ 52,631,268	3,190,956,803	$0.016494	1,000	$ 16.49	$ 197.93

(1) For purposes of this template and as agreed by Staff, wholesale revenues and true-ups are not included in the years 2020-2023.

SMECO - Residential EE
Comparison of Estimated Surcharges/Customer Bill Impact
5 Year Amortization

Year	Program Cost	Amortization	Unamortized Balance	Return	Wholesale Revenue (1)	True-up (1)	Revenue Requirement	Electricity Sales	Surcharge	Average kWh/month	Estimated Monthly bill impact	Estimated Annual bill impact
2019 (5 Year Amortization)	$ 14,342,216	$ 10,494,700	$ 33,839,489	$ 1,370,984	$ -	$ (1,182,786)	$ 10,682,898	2,181,765,175	$0.00490	1,200	$ 5.88	$ 70.56
2020 (5 Year Amortization)	$ 12,041,908	$ 10,863,503	$ 35,386,698	$ 1,504,156	$ -	$ -	$ 12,367,659	2,189,297,171	$0.00565	1,200	$ 6.78	$ 81.36
2021 (5 Year Amortization)	$ 12,041,908	$ 11,537,110	$ 36,565,103	$ 1,538,528	$ -	$ -	$ 13,075,638	2,185,255,810	$0.00598	1,200	$ 7.18	$ 86.16
2022 (5 Year Amortization)	$ 12,041,908	$ 11,838,101	$ 37,069,902	$ 1,553,039	$ -	$ -	$ 13,391,140	2,188,846,874	$0.00612	1,200	$ 7.34	$ 88.08
2023 (5 Year Amortization)	$ 12,041,908	$ 12,543,414	$ 37,273,709	$ 1,545,278	$ -	$ -	$ 14,088,692	2,194,187,662	$0.00642	1,200	$ 7.71	$ 92.52
2024	$ -	$ 9,596,660	$ 24,730,295	$ 1,259,532	$ -	$ -	$ 10,856,192	2,200,954,015	$0.00493	1,200	$ 5.92	$ 71.04
2025	$ -	$ 7,414,566	$ 15,133,635	$ 727,578	$ -	$ -	$ 8,142,144	2,208,540,209	$0.00369	1,200	$ 4.42	$ 53.04
2026	$ -	$ 5,093,732	$ 7,719,069	$ 334,364	$ -	$ -	$ 5,428,096	2,230,297,554	$0.00243	1,200	$ 2.92	$ 35.04
2027	$ -	$ 2,625,337	$ 2,625,337	$ 88,711	$ -	$ -	$ 2,714,048	2,253,981,979	$0.00120	1,200	$ 1.44	$ 17.28

(1) For purposes of this template and as agreed by Staff, wholesale revenues and true-ups are not included in the years 2020-2023.

Note: In the above calculation, Years 2024 – 2028 forecast the estimated rate if there were no additional EmPOWER programs expenditures after 2023.
While this complies with Staff's request, the company does not believe this accurately represents the ongoing impact to customers as the EmPOWER program is anticipated to continue beyond 2023.

SMECO - Residential Electric EE
Comparison of Estimated Surcharges/Customer Bill Impact
Declining Amortization

Year	Program Cost	Amortization	Unamortized Balance	Return	Wholesale Revenue (1)	True-up (1)	Revenue Requirement	Electricity Sales	Surcharge	Average kWh/month	Estimated Monthly bill impact	Estimated Annual bill impact
2019 (5 Year Amortization)	$ 14,342,216	$ 10,494,700	$33,839,489	$ 1,370,984	$ -	$(1,182,786)	$ 10,682,898	2,181,765,175	$0.00490	1,200	$ 5.88	$ 70.56
2020 (4 Year Amortization)	$ 12,041,908	$ 11,460,453	$35,386,698	$ 1,487,436	$ -	$ -	$ 12,947,889	2,189,297,171	$0.00591	1,200	$ 7.10	$ 85.20
2021 (3 Year Amortization)	$ 12,041,908	$ 13,766,405	$33,984,370	$ 1,439,194	$ -	$ -	$ 15,205,599	2,185,255,810	$0.00696	1,200	$ 8.35	$ 100.20
2022 (2 Year Amortization)	$ 12,041,908	$ 17,802,195	$34,243,656	$ 1,211,324	$ -	$ -	$ 19,013,519	2,188,846,874	$0.00869	1,200	$ 10.42	$ 125.04
2023 (1 Year Amortization)	$ 12,041,908	$ 28,483,370	$28,483,369	$ 555,561	$ -	$ -	$ 29,038,931	2,194,187,662	$0.01323	1,200	$ 15.88	$ 190.56

(1) For purposes of this template and as agreed by Staff, wholesale revenues and true-ups are not included in the years 2020-2023.

When transitioning from the 5-Year Amortization process to an Expensing program cost construct, there will be an increasing impact to the surcharge as the process goes from 2019 to 2023. The monthly bill impacts are illustrated in the following table.

Estimated Montly Bill Impact										
	BGE		DPL		PE		Pepco		SMECO	
Year	5 Year Amortization	Declining Amortization	5 Year Amortization	Declining Amortization	5 Year Amortization	Declining Amortization	5 Year Amortization	Declining Amortization	5 Year Amortization	Declining Amortization
2019	$3.61	$3.61	$3.64	$3.64	$5.80	$5.80	$3.48	$3.48	$5.88	$5.88
2020	$4.18	$4.28	$4.20	$4.29	$6.77	$8.88	$3.94	$4.03	$6.78	$7.10
2021	$4.27	$4.70	$3.99	$4.40	$7.38	$10.10	$3.77	$4.16	$7.18	$8.35
2022	$4.33	$5.52	$3.91	$5.09	$7.80	$12.03	$3.66	$4.75	$7.34	$10.42
2023	$4.38	$9.26	$4.12	$8.79	$8.15	$16.49	$4.01	$8.37	$7.71	$15.88

Not captured in the above table, is that under the 5-Year Amortization process, surcharge collection will continue beyond 2023 to 2028 with the utilities continuing to earn a return on the prior years uncollected expenses.

The next tables compare the total revenue requirement and utility return collected for the 5-year amortization and declining amortization transition to expensing program costs in 2023.

Utility	Revenue Requirement		
	5 Year Amortization	Declining Amortization	Difference
BGE	$425,081,566	$373,557,746	$51,523,820
DPL	$65,268,127	$57,514,443	$7,753,684
PE	$187,649,008	$171,528,577	$16,120,432
Pepco	$186,670,381	$164,847,702	$21,822,679
SMECO	$90,746,507	$86,888,836	$3,857,671
Total	**$955,415,589**	**$854,337,303**	**$101,078,286**

Utility	Return Component		
	5 Year Amortization	Declining Amortization	Difference
BGE	$56,538,876	$36,568,660	$19,970,216
DPL	$8,502,011	$5,442,001	$3,060,010
PE	$41,409,170	$24,281,074	$17,128,096
Pepco	$25,645,430	$16,997,442	$8,647,988
SMECO	$9,922,170	$6,064,499	$3,857,672
Total	**$142,017,657**	**$89,353,676**	**$52,663,982**

The surcharge impact rises significantly when transitioning to an expensing protocol for cost recovery compared to amortizing costs over five years. However program costs in the 2020 to 2023 program years will still need to be recovered annually through 2028, with a corresponding return component and revenue requirement. The difference in the revenue

requirement for the two cost recovery methodologies is over $101 million dollars, which includes $52 million of utility return for amortizing cost over five years versus the declining transition cost recovery. In making the decision on the appropriate cost recovery for EmPOWER programs the Commission will have to balance the surcharge impact for the declining amortization transition versus the overall greater cost for continuing with the 5 year amortization cost recovery methodology.

Performance Based Incentives

The American Council for Energy-Efficient Economy ("ACEEE") article[13] titled, "Aligning Utility Business Models with Energy Efficiency" lists factors that contribute to a comprehensive strategy to achieve high utility sector energy efficiency savings, which includes:

1. Establish specific energy efficiency savings targets – EmPOWER Maryland has a goal to reduce electricity consumption an average of 2% in the 2018-2020 and 2021-2023 program cycles compared to a baseline of 2016 weather normal electricity sales.
2. Align utility ratemaking with energy efficiency by incorporating:
    a. Program Cost Recovery – The EmPOWER Utilities are authorized to recover EMPOWER program cost over a 5-year time period and earn a return equivalent to the WACC as determined by the Commission in a base rate case.
    b. Full Revenue Decoupling – Recovery of lost contributions to fixed costs and elimination of the throughput incentive (profits linked to increased energy sales) via revenue decoupling. Maryland has decoupling.
    c. Performance Incentives – Creation of perform-based earnings opportunities for energy efficiency investments. Maryland does not have performance-based incentives in place for energy efficiency investments.

A 2015 ACEEE study titles, "Beyond Carrots for Utilities: A National Review of Performance Incentives for Energy Efficiency"[14] reviewed performance incentives in the United

[13] aceee.org/sector/state-policy/toolkit/aligning-utility
[14] aceee.org/sites/default/files/publications/researchreports/u1504.pdf

States and identified 25 states that had such a policy in place. There are four general types of incentives:

- Shared Net Benefits Incentives – Provide utilities the opportunity to earn an amount equivalent to some portion of benefits of a successful energy efficiency program. The amount is usually a percentage of the positive difference between program spending and dollar valuation of energy savings achieved. Shared net benefits energy efficiency performance incentives are the most common among the 25 states.
- Energy Savings Based Incentives – Reward utilities for achieving and sometimes for exceeding, pre-established energy savings goals. Often, these energy savings targets are derived from statewide energy resource standards (Maryland's two percent electricity reduction goal).
- Multifactor Incentives – The calculation of performance incentives include multiple metrics, not just energy savings.
- Rate-of-Return incentives – Allow utilities to earn a rate of return based on efficiency spending, which equates demand-side spending with supply-side spending.

To illustrate the potential bill impact for performance incentives, and given Maryland has an established electricity savings goal, Staff has selected the Energy Savings- Based Incentive structure and will use reported 2018 reported electricity savings to establish the incentive structure, consistent with penalty and incentive structures used in other states. For this illustration, Staff adopts a +/- 20 percent band to establish when penalties and incentives can occur. In other words, a penalty would not apply unless a utility failed to meet eighty80 percent (80%) of its goal. Conversely, the utility would not be able to earn an incentive unless it achieved one-hundred and twenty percent (120%) percent of its goal. The following table calculates how the utilities reported energy savings in 2018 compared to the 2018 goal. It should be noted that in ACEEE's article, they did not recommend that penalties be a part of these performance incentive structures, as the goal is to incentivize utilities to provide energy efficiency programs for their customers. There should be a reasonable earnings opportunity for the successful implementation of energy efficiency programs

Utility	2018 Reported Savings (MWh)	Interim 2018 Goal	Percent of Sales	Acheivement of Goal
BGE	738,589	2.00%	2.31%	15.50%
DPL	91,414	1.87%	2.17%	16.04%
PE	99,445	1.40%	1.34%	-4.29%
Pepco	441,771	1.92%	3.04%	58.33%
SMECO	65,564	1.93%	1.93%	0.00%

In 2018, based on the +/- 20% range, only Pepco would have received a performance incentive. No utility would have been assessed a penalty. The following table illustrates possible incentive impacts based on Pepco earning an incentive based on the percentage of 2018 program spending.

Incentive Cap	Incentive	Residential Share	Residential Revenue Requriement 2019	Residential Revenue Requirement 2019 Including Incentive	2019 Bill Impact	2019 Bill Impact with Incentive	Monthly Bill Impact Increase with Incentive	Annual Impact
5%	$3,666,401	$1,962,593	$23,153,612	$25,116,205	$3.48	$3.78	$0.30	$3.54
7%	$5,132,961	$2,747,630	$23,153,612	$25,901,242	$3.48	$3.89	$0.41	$4.96
10%	$7,332,801	$3,925,186	$23,153,612	$27,078,798	$3.48	$4.07	$0.59	$7.08
15%	$10,999,202	$5,887,779	$23,153,612	$29,041,391	$3.48	$4.37	$0.89	$10.62
20%	$14,665,602	$7,850,371	$23,153,612	$31,003,984	$3.48	$4.66	$1.18	$14.16

The assumptions Staff used in the development are as follows:

- Incentive amount was calculated by multiplying the incentive cap by 2018 program costs of $73,328,011.
- The Residential Share was calculated by multiplying the Incentive by 54%, which was the reported share of residential energy savings compared to total energy savings.
- The Residential Revenue Requirement for 2019 Including Incentive was calculated by adding the 2019 Residential Revenue Requirement (from the most recent EmPOWER surcharge filing) to the Residential Share.
- The Bill Impact Columns were calculated by dividing the revenue requirements by 2019 forecasted residential electricity sales and multiplying

that number by 813 kWh, the average monthly usage for Pepco residential customers.

- The Annual Impact column was calculated by multiplying the Monthly Bill Impact Increase with Incentive by 12 months.

Staff notes several observations on performance incentives.

- There will be an impact on ratepayers if a utility qualifies to earn a performance incentive. The impact on ratepayers will be determined by the structure of the performance incentive construct.
- There should be a corresponding penalty if a utility fails to meet the minimum threshold.
- In 2018, based on reported energy savings, all the utilities would have met the minimum threshold (eighty percent in this example) and three utilities exceeded their goal by more than ten percent.
- This may indicate that the 2018-2020 EmPOWER Program plans, which were developed with the statutory goal in place, were designed to meet the goal.

In the ACEEE report, the authors noted that the major advantage of incentives is that they put energy efficiency and supply-side resources on relatively equal financial footing, enabling shareholders to earn a comparable financial benefit on either investment. An important additional advantage with most of these mechanisms is that they are tied to a specific level of performance rather than spending. The authors also noted several three arguments against incentives, which included the cost and difficulty of implementing a robust evaluation mechanism to verify savings for performance-based incentive, as well as the view that ratepayers should not have to pay utilities for simply complying with regulatory or statutory mandates for energy efficiency.

ACEEE finds that there are three general categories of regulatory tools that better align energy efficiency as a utility resource with the traditional utility ratemaking principles, including:

- Program Cost Recovery –Recovery of the direct costs of energy efficiency programs.

- Removal of Throughput Incentive – Recovery of lost contributions to fixed costs and elimination of throughput incentive (profits linked to increased energy sales) via symmetrical revenue decoupling.
- Performance Incentives – Creation of performance-based earnings opportunities for energy efficiency investments.

These tools, combined with specific energy efficiency targets, can help utilities consider the value of energy efficiency in a way similar to their evaluation of other supply-side investments.

While ACEEE research supports the collective importance of cost-recovery, lost revenue recovery and performance incentives to achieving high energy savings, Staff notes that in the past the utilities have been successful in reaching their EmPOWER Maryland goals in absence of a performance incentive mechanism. The state achieved the fifteen percent reduction in per capita energy usage and peak demand reduction by the end of 2015. The planning process for the 2015-2017 EmPOWER Program cycle did not include a post-2015 goal. The EmPOWER Utilities now operate under the goal established by the Commission in Order No. 87082 and have been mostly successful in reaching their goals.

As such, Staff does not have a recommendation for a performance-based incentive structure at this time but will continue to investigate the issue for possible inclusion in future EmPOWER program cycles, as changes to efficiency standards may lead to utilities reaching the two percent goal, at the direction of the Commission.