2021-03-23 HB 30 (Support).pdf

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Position: FAV

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STATE OF MARYLAND
OFFICE OF THE ATTORNEY GENERAL

FACSIMILE NO.

WRITER'S DIRECT DIAL NO.

410-576-6584

March 23, 2021

TO: The Honorable Delores G. Kelley
Chair, Finance Committee

FROM: Office of the Attorney General

RE: HB0030 – Office of People's Counsel – Alterations (Office of People's Counsel Environmental Reform Act) – **Letter of Support**

The Office of Attorney General unequivocally supports HB 30, as amended, Delegate Korman's legislation to alter the maximum amount that can be charged to a public service company for a State fiscal year, requiring the Office of People's Counsel (OPC) to hire at least one assistant People's Counsel to focus on environmental issues, and permitting the Office to hire or retain experts in climate change. The bill further requires OPC to consider the public safety, economic welfare, *and* environmental interests of Maryland and Marylanders in determining whether a rate affects the interests of residential and noncommercial users.

We believe that climate change is real and, consistent with the Preamble to HB 30, electricity consumption accounts for a significant amount of the State's greenhouse gas emissions. As such, the Office of People's Counsel should have, included in its mandate, environmental considerations in addition to mere rate equities. Having reviewed OPC's supporting testimony, we think three propositions therein are critical and warrant our support: (1) "[r]esidential customers . . . have a compelling interest in mitigating the environmental, health[,] and societal costs of climate change"; (2) "HB 30 clarifies existing law regarding what should be considered as far as interests of Maryland residential customers and ensures OPC has the resources to further those interests"; and (3) better "policy solutions will further the goals of mitigating climate change, promoting consumer welfare and protecting consumers from monopolistic, anti-consumer, and anti-competitive practices of energy companies."

For the foregoing reasons, the Office of the Attorney General urges a favorable report on HB 30.

cc: Members of the Finance Committee

HB 30-Delegate Marc Korman-FAV.pdf
Uploaded by: Korman, Marc
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Marc Korman
Legislative District 16
Montgomery County

Appropriations Committee

Subcommittees

Capital Budget

Chair, Transportation and the Environment

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THE MARYLAND HOUSE OF DELEGATES
ANNAPOLIS, MARYLAND 21401

Office of People's Counsel Environmental Reform Act (HB 30)

Testimony of Delegate Marc Korman-Favorable

Thank you Madam Chair, Mr. Vice Chair and members of the Finance Committee. I come before you today to present the Office of People's Counsel Environmental Reform Act (HB 30). As amended, the legislation requires Maryland's Office of People's Counsel (OPC) to consider environmental concerns as part of its mission to represent residential ratepayers before the state's utilities regulator, the Public Service Commission (PSC).

For nearly a century, the OPC has provided valuable advocacy on behalf of Maryland's residents on ratepayer issues. Interestingly, residential ratepayer issues are not clearly defined. The bill before you would define the interests of residential ratepayers as including public safety, economic welfare, and environmental interests, adopting language other state's Offices of People Counsel use.

Why environmental interests? As this committee knows, the Maryland Department of Environment estimates that electricity use accounts for 31% of the state's Greenhouse Gas emissions.[1] Given the integral role the PSC plays in regulating electricity use and the electric industry in Maryland, Marylanders deserve to have an advocate with the PSC who is looking out for the state's environmental interests.

The legislation requires that the OPC hire at least one assistant people's counsel who will focus on environmental issues and empowers the OPC to represent and advocate for the environmental interests of Maryland and it's residents on all matters before the PSC. The accompanying fact sheet details several instances in which the OPC's public comments on PSC rulings focused primarily on ratepayer impacts in terms of cost and did not analyze the proposal's environmental impacts, even though they are also important to ratepayers.

[1] "State of Maryland 2017 Greenhouse Gas Emission Inventory Documentation," Maryland Department of Environment, n.d., https://mde.maryland.gov/programs/Air/ClimateChange/Documents/MD%202017%20Periodic%20GHG%20Emissions%20Inventory%20Documentation.pdf.

As part of the environmental mandate, the legislation adds the OPC to the Commission on Climate Change and Zero Emission Electric Vehicle Infrastructure Council, and makes clear that climate and environmental experts can be hired by the OPC to assist in their work.

The bill also grants OPC an increase to its operating expense cap proportional to the one received by the PSC last year. As you know, the PSC and OPC are ultimately funded by a percentage of gross operating revenues of the regulated utilities.

As amended, my understanding is that the major utilities in Maryland no longer oppose the bill and it has the backing of our new People's Counsel—pending his confirmation—David Lapp. I urge a favorable report.

OPC Enviornmental Reform Act Fact Sheet.pdf
Uploaded by: Korman, Marc
Position: FAV

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Appropriations Committee
Subcommittees
Capital Budget
Chair, Transportation and the Environment
Oversight Committee on Personnel

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Office of People's Counsel Environmental Reform Act (HB 30) – As Amended – Fact Sheet

Overview

The Office People's Counsel Environmental Reform Act requires Maryland's Office of People's Counsel (OPC) to pursue an environmental mandate as part of its mission to represent residential ratepayers before the state's utilities regulator, the Public Service Commission (PSC).

The bill:

1. **Clarifies that in determining whether the interests of residential ratepayers are affected, the OPC shall consider the public safety economic welfare; and environmental interests of the state and its residents including the state's progress toward meeting greenhouse gas emissions reduction goals.**
2. **Requires OPC to hire one Assistant People's Counsel to focus on environmental issues.**
3. **Allows OPC to hire scientific and technical experts on climate change and other environmental disciplines.**
4. **Adds the OPC to the Commission on Climate Change and the Zero Emission Electric Vehicle Infrastructure Council.**
5. **Increases OPC funding by a percentage commensurate with the increase received by the PSC in 2020.**

The Maryland Commission on Climate Change estimates that Maryland is the 4th most vulnerable state in terms of sea-level rise.[1] Additionally, the Maryland Department of Environment estimates that electricity use accounts for 31% of the state's Greenhouse Gas emissions.[2] Given the integral role the PSC plays in regulating electricity use and the electric industry in Maryland, Marylanders deserve to have their advocate with the PSC look out for the state's environmental interests.

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[1] "Sea-Level Rise Projections for Maryland 2018," Maryland Department of Environment (Maryland Commission on Climate Change, n.d.), https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Pages/index.aspx.
[2] "State of Maryland 2017 Greenhouse Gas Emission Inventory Documentation," Maryland Department of Environment, n.d., https://mde.maryland.gov/programs/Air/ClimateChange/Documents/MD%202017%20Periodic%20GHG%20Emissions%20Inventory%20Documentation.pdf.

The OPC was founded in 1924 as the first independent utility consumer advocacy office in the United States. Currently, the OPC focuses most of its analysis on residential ratepayer impacts and often does not analyze environmental impacts. The legislation would follow the model of other jurisdictions in specifying that as part of the OPC's representation of residential ratepayer interests, it should take into account concerns related to public safety, economic welfare, and environmental interests.

Powers

The legislation empowers the OPC to represent the environmental interests of Maryland and it's residents on all matters before the PSC. Several recent proceedings before the PSC highlight the need for a dedicated climate advocate within OPC. In the PSC ruling "PC 44 Electric Grid", the PSC launched a target review of election distribution systems in Maryland with the goal of ensuring that Maryland's electric grid is customer-centered, affordable, reliable, and environmentally sustainable. However, OPC's public comments focused mainly on ratepayer impacts in terms of cost and did not analyze how the proposal would impact Maryland's emissions. Similarly, OPC's comments on case #9628 regarding U.S. Wind focused strictly on ratepayer impacts and did not specifically mention environmental issues. The legislation would empower OPC to analyze these types of proceedings to ensure Maryland's environmental interests are being properly evaluated.

As the OPC deems necessary, they will be able to conduct investigations and recommend the PSC make decisions which will protect the environmental interests of the state.

The OPC will also be able to recommend legislation to the General Assembly on any matter related to the PSC's jurisdiction. Additionally, the OPC is entitled to appear before any federal or state jurisdiction to protect Maryland's environmental interests. The OPC's assistant counsel on environmental issues would be added to the Maryland Commission on Climate Change, which is charged with developing an action plan to combat the negative impacts of climate change, as well as the Maryland Zero Emission Vehicle Infrastructure Council.

Staffing

The OPC will be required to hire at least one assistant people's counsel who will focus on environmental issues. Additionally, the OPC is permitted to consult or hire experts in the fields of utility regulation and climate change. These experts include, but are not limited to; cost of capital experts, rate design experts, accountants, economists, engineers, transportation specialists, lawyers, meteorologists, oceanographers, ecologists, foresters, geologists, seismologists and botanists.

Commissions

The bill adds OPC to the Commission on Climate Change and Zero Emission Electric Vehicle Infrastructure Council.

Funding

To fund the new position of assistant counsel for environmental issues, the OPC will also receive 0.074% of the PSC's gross operating revenues derived from intrastate utility and electricity supplier operations in the preceding calendar year, which represents an increase from the 0.05% currently used to fund OPC. Last year, the PSC received an equivalent increase in its funding.

Conclusion

For nearly a century, the OPC has provided valuable advocacy on behalf of Maryland's residents on ratepayer issues. Office People's Counsel Environmental Reform Act simply extends that advocacy to environmental issues to ensure that the environmental interests of the state are not only addressed and evaluated, but also advocated for.

03192021 - Alterations Office of People's Counsel
Uploaded by: Lapp, David
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BILL NO.:	**House Bill 30 - Office of People's Counsel – Alterations (Office of People's Counsel Environmental Reform Act)**
COMMITTEE:	**Finance**
HEARING DATE:	**March 23, 2021**
SPONSOR:	**Delegate Korman**
POSITION:	**Favorable**

****

The Maryland Office of People's Counsel (OPC) supports House Bill 30: Office of People's Counsel Environmental Reform Act. The interests of Maryland citizens in the environment and mitigating climate change should be represented in Public Service Commission (Commission) matters. State policy needs to accommodate both consumer and environmental considerations; State advocacy before the Commission on residential customer matters should reflect—and reconcile where necessary—consumer and environmental goals. Although we think OPC's current mandate calls on it to represent the environmental interests of residential customers, legislation is appropriate and necessary to make OPC's mandate explicit and provide the resources for OPC to be effective in that effort.

Current law (Public Utility Code § 2-204) mandates that OPC evaluate and protect the "interests of residential" utility customers. To protect those interests, OPC is authorized to participate in Commission proceedings "on the rates, service, or practices of a public service company." Unquestionably, the practices of public service companies affect the environment and climate change—which in turn affects utility residential customers. As the General Assembly has found, "[g]reenhouse gases are air pollutants that threaten to endanger the public health and welfare of the people of Maryland" and "[g]lobal warming poses a serious threat to the State's future health, well-being, and prosperity." Environment Art. § 2-1201. Residential customers thus have a compelling interest in mitigating the environmental, health and societal costs of climate change.

Despite the connection between the environment and residential customer interests, consumer advocate offices across the country historically have not fully embraced environmental protection and climate change mitigation as part of their consumer protection mandates. Many state consumer advocate offices—like OPC—were created years ago to address rate issues at a time when there was less environmental awareness and before there was broad scientific consensus on the science behind climate change. Times have changed, and today OPC is committed to incorporating the interests of Maryland citizens in mitigating climate change and environmental protection into its advocacy. Importantly, HB 30 clarifies existing law regarding what should be considered as far as interests of Maryland residential customers and ensures OPC has the resources to further those interests.

Regulatory policy can—and must—simultaneously further the interests of consumers in both environmental protection and cost-effectiveness. The best policy solutions will further the goals of mitigating climate change, promoting consumer welfare, and protecting consumers from monopolistic, anti-consumer, and anti-competitive practices of energy companies. Current State law requires that these goals be compatible. In setting Maryland's greenhouse gas reduction goals, the General Assembly mandated that the climate goals be "implemented in an efficient and cost-effective manner" that do not "disproportionately impact rural or low-income, low- to moderate-income, or minority communities or any other particular class of electricity ratepayers." Environment Art. § 2-1206. Further, Maryland law requires that State plans to reduce greenhouse gas emissions "do not decrease the likelihood of reliable and affordable electrical service" and "[c]onsider whether the measures would result in an increase in electricity costs to consumers in the State." *Id*. HB 30 thus codifies the current state of Maryland law into the People's Counsel's work.

Maryland OPC's efforts to combat climate change require resources. The modifications to OPC's statute—and any expectations for OPC to significantly expand its work—must be accompanied by an increase in OPC's resources. While OPC's impact is high relative to its resources, its resources are small relative to the private interests that participate in applications, hearings, working groups and other matters before the Commission. HB30 provides the necessary resources to include a robust environmental mission. The bill increases the statutory budget cap for OPC; that cap establishes the outer limit of OPC's budget. Last year the Commission's statutory budget cap was increased, but OPC's budget cap was untouched, even though OPC's workload increases proportionately with the Commission's workload. HB 30 would increase OPC's cap in the same proportion as the Commission's budget cap was raised last year. We believe that this increase would be sufficient to cover OPC's resource needs under HB 30.

OPC strongly supports the HB30, as amended by the House, to its authorizing statute. The bill will remove any doubt about OPC's mission, reconcile its historical mandate with the present environmental crisis, and make its role consistent with State policy.

Recommendation: OPC supports House Bill 30.

HB30 - Office of People's Counsel-Alterations (Off
Uploaded by: Tulkin, Josh
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Committee: **Finance**
Testimony on: HB30 – "Office of People's Counsel – Alterations (Office of People's Counsel Environmental Reform Act)"
Position: **Support**
Hearing Date: March 23, 2021

The Maryland Sierra Club strongly supports HB30, as amended in the House, and urges a favorable report. This bill is a perfect complement to legislation which the Senate (and the House) already has approved this session, SB83 (HB298).

The bill now before this Committee, HB30, expands the portfolio of the Office of People's Counsel (OPC) – representing the interests of residential and noncommercial ratepayers before the Public Service Commission (PSC) and other bodies – to include environmental, economic, and public safety interests of Maryland residents. In particular, OPC's duties now would include advocating on matters relating to Maryland's greenhouse gas emission-reduction goals. This would be funded through a small increase in the assessment on public service companies already used to fund OPC.

OPC plays a vital role in assisting the PSC in carrying out the PSC's broad and consequential regulatory authority. By authorizing the OPC to engage on environmental, economic, and public safety issues, OPC's opportunity to meaningfully and effectively assist the PSC will, in important ways, better align with the issues which the PSC addresses. In this regard, the PSC's governing statute already specifies that PSC must consider these types of matters: "[i]n supervising and regulating public service companies, the [PSC] shall consider the public safety, the economy of the State, the conservation of natural resources, and the preservation of environmental quality." MD Pub. Util. Art. sec. 2-113.

With regard to climate mitigation issues, the PSC is one of the most significant state actors in determining whether the state will achieve the climate goals enacted by the General Assembly. The PSC is responsible for approving all large electricity generating facilities; manages the state's energy efficiency program, EmPOWER Maryland; and is participating in efforts to establish the infrastructure needed to support a vast increase in plug-in electric vehicles. The PSC, however, recently concluded that its governing statute does not allow it to consider the impacts of its decisions on the state's greenhouse gas emissions. In order to correct this, SB83/HB298 explicitly provides that the PSC shall consider the state's climate mitigation goals when these goals are relevant to the decisions the PSC is making. That legislation also clarifies that the PSC's consideration of economic concerns includes consideration of "fair and stable labor standards for affected workers."

HB30 complements SB83/HB298. It would strengthen the PSC's consideration of climate and other environmental issues by providing a further source of expertise to assist the PSC in analyzing complex and multifaceted scientific and public policy matters.

We urge a favorable report on HB30, as amended by the House.

Mark Posner
Legislative Chair
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Josh Tulkin
Chapter Director
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HB0030-FAV-CJW-OfficeofClimateCounsel (1).pdf
Uploaded by: Younts, Diana
Position: FAV

Committee: **Finance**
Testimony on: **HB0030 - "Office of People's Counsel-Alterations (Office of People's Counsel Environment Reform Act**
Organization: **MLC Climate Justice Wing**
Person Submitting: **Diana Younts, co-chair**
Position: **Favorable**
Hearing Date: **March 23, 2021**

Dear M. Chair and Committee Members,

Thank you for allowing our testimony today in support of HB0030. MLC's Climate Justice Wing is a statewide coalition of over 50 grassroots and grasstops organizations focused on getting State level climate justice legislation passed. Each bill for which we advocate is evaluated through an equity lens, with a particular focus on how disadvantaged communities are affected by the bill and the bill's climate impact.

HB0030 will require the Office of People's Counsel (OPC) to hire counsel to focus on environmental matters and to retain experts on climate change. Currently, the existing OPC does not usually analyze environmental impacts of legislation.

The Maryland Commission on Climate Change estimates that Maryland is the 4th most vulnerable state in terms of sea-level rise. Marylanders deserve to have an advocate who focuses on environment and climate issues and to be part of the Maryland Commission on Climate Change which is charged with developing action plans to combat the impact of climate change.

For these reasons we urge you to vote favorably for HB0030.

MLC Climate Justice Wing:
Maryland Legislative Coalition
MD Campaign for Environmental Human Rights
Chesapeake Climate Action Network
WISE
Frack Free Frostburg
Mountain Maryland Movement
Clean Water Action

Maryland NAACP
Howard County Indivisible

Columbia Association Climate change and sustainability advisory committee
HoCo Climate Action
CHEER
Climate XChange - Maryland
Mid-Atlantic Field Representative/
National Parks Conservation Association
350 Montgomery County
Glen Echo Heights Mobilization
The Climate Mobilization Montgomery County
Montgomery County Faith Alliance for Climate Solutions
Montgomery Countryside Alliance
Takoma Park Mobilization Environment Committee
Audubon Naturalist Society
Cedar Lane Unitarian Universalist Church
Environmental Justice Ministry
Coalition For Smarter Growth
DoTheMostGood Montgomery County

MCPS Clean Energy Campaign
Montgomery County DCC
Potomac Conservancy
Casa de Maryland
Nuclear Information & Resource Service
Clean Air Prince Georges
Ji'Aire's Workgroup
Laurel Resist
Greenbelt Climate Action Network
Maryland League of Conservation Voters
Unitarian Universalist Legislative Ministry of Maryland
Concerned Citizens Against Industrial Cafos
Wicomico NAACP
Chesapeake Physicians for Social Responsibility
Chispa MD
Climate Law & Policy Project
Poor Peoples Campaign
Labor for Sustainability
The Nature Conservancy
Clean Air Prince Georges
350 Baltimore

HB0030-FAV-TPMEC-senateOfficeofClimateCounsel (2).

Uploaded by: Younts, Diana
Position: FAV

TAKOMA PARK MOBILIZATION

Environment Committee

Committee: Finance
Testimony on: HB0030 - "Office of People's Counsel-Alterations (Office of People's Counsel Environment Reform Act
Organization: Takoma Park Mobilization Environment Committee
Person Submitting: Diana Younts, co-chair
Position: Favorable
Hearing Date: March 23, 2021

Dear M. Chair and Committee Members,

Thank you for allowing our testimony today in support of HB0030, which will require the Office of People's Counsel (OPC) to hire counsel to focus on environmental matters and to retain experts on climate change.

The Maryland Commission on Climate Change estimates that Maryland is the 4th most vulnerable state in terms of sea-level rise. Marylanders deserve to have an advocate who focuses on environment and climate issues and to be part of the Maryland Commission on Climate Change which is charged with developing action plans to combat the impact of climate change. Currently, of the existing Office of People's Counsel (OPC), which although it advocates for ratepayers, does not usually analyze environmental impacts.

For these reasons we urge you to vote favorably for HB0030.

HB0030 - LOC - Office of People's Counsel - Altera

Uploaded by: Fahrig, Landon

Position: INFO

Maryland Energy Administration

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Mary Beth Tung, Director

TO: Members, Senate Finance Committee
FROM: Mary Beth Tung – Director, MEA
SUBJECT: HB0030 - Office of People's Counsel - Alterations (Office of People's Counsel Environmental Reform Act)
DATE: March 23, 2021

MEA Position: Letter of Concern

Our mission at the Maryland Energy Administration (MEA) is to promote affordable, reliable, and cleaner energy that benefits *all* Marylanders. Our programs and policies help lower energy bills, support business energy upgrades, support a cleaner environment, and promote energy independence for the State.

As amended, House Bill 30 will dilute the mission of the Office of People's Counsel (OPC). The mission of the Maryland Office of People's Counsel (OPC) is to represent Maryland's residential utility consumers. However, *environmental interests and the interests of ratepayers are often mutually exclusive*. Maryland's most significant efforts to promote clean energy and energy efficiency carry hefty price tags, and those costs are ultimately borne by citizens and ratepayers.

Maryland has instituted and occasionally amended a Renewable Portfolio Standard (RPS). The RPS carries with it a cost of compliance, as energy suppliers are required to purchase a certain amount of Renewable Energy Credits (RECs) to comply with the statutory mandates of the program. Over the last 5 years alone, this cost to ratepayers was $553,287,674[1]. The statutory EmPOWER Maryland program requires participating electric companies to procure energy savings year-over-year. This program is cost effective, but again, the costs are ultimately borne by ratepayers. The cost recovery mechanism in EmPOWER Maryland has undergone little substantive changes over the years, resulting in escalating costs. The total amount accrued, including interest is now in excess of *$820 million*.

To iterate, MEA is highly supportive of efforts to reduce energy consumption and increase energy efficiency and generation, especially generation that is clean and environmentally beneficial. The Maryland Department of the Environment (MDE), Department of Natural Resources (DNR), and others work hard to minimize environmental impacts from the energy sector. The Department of Housing and Community Development spurs progress through its EmPOWER Maryland Low Income Energy Efficiency Program, and MEA also works diligently in the EmPOWER program proceedings to ensure continued success.

At the same time, MEA takes into account the costs to ratepayers - particularly during the economic hardships created by the COVID-19 pandemic - and the long-term impacts that the

[1] Total cost of RECs 2015-19, Maryland Public Service Commission, Renewable Energy Portfolio Standard Report: With Data for Calendar Year 2019

costs of these and other programs can have on Maryland's most vulnerable. However, under current law residential ratepayer impact is ***the sole mission of OPC***. It is unclear how the OPC will be in a better position than MDE and DNR to determine environmental impacts, thus this requirement appears both confusing and duplicative. MEA believes that this committee should carefully weigh the impacts that House Bill 30 will have on this mission and the mission of other state agencies.

The full MEA Empower Program Cost Analysis is attached for reference, and MEA urges the committee to consider it and the foregoing before issuing its report.

MEAEmpowerProgramCostAnalysis.pdf
Uploaded by: Fahrig, Landon
Position: INFO

EMPOWER PROGRAM COST ANALYSIS

Prepared for the Maryland Energy Administration

October 15, 2020

Prepared by:

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<u>TABLES</u>

EXECUTIVE SUMMARY

EmPOWER Maryland ("EmPOWER") has served the State of Maryland well over the past decade by achieving significant energy savings for the benefit of residents. The EmPOWER Utilities have successfully administered energy efficiency and conservation programs that have, collectively, surpassed the energy efficiency goals set by law. The energy efficiency programs have reduced energy consumption and energy demand in the State, and evaluation of the EmPOWER Program shows that the portfolio has provided benefits in excess of the costs. As we prepare for the final three-year cycle of the existing mandate, we need to be cognizant of uncollected program costs that have accrued in the current structure of EmPOWER.

The cost recovery mechanism in EmPOWER Maryland has undergone little substantive changes over the years. In recent years, the amortization schedule has resulted in escalating cost—inclusive of the accrued interest—and is now in excess of $820 million. Given the existing unamortized program costs, the Maryland Energy Administration ("MEA") presents analysis of two performance incentive mechanisms that would eliminate the uncollected program costs over 10 years. Due to the impacts of COVID-19 on Maryland ratepayers and the broader economy, MEA does not recommend implementation of the mechanisms at this time but presents the analysis for the Commission's consideration once the impacts of COVID-19 have subsided. The analysis builds on the current structure of the EmPOWER program with the addition of a performance mechanism that seeks to reduce costs to ratepayers by incentivizing efficiency in spending and begins the process towards aligning program costs and revenue collected annually. The effect of aligning program costs and revenues collected is a reduction of interest paid over time. In the cost recovery mechanism, a reduction of the interest costs can be achieved by reducing the interest rate applied to the uncollected program costs or by aligning program costs and revenue over time to reduce and eventually eliminate the unamortized balance. The latter, as analyzed, would reduce the unamortized balance over a period of 10 years. Once eliminated, the EmPOWER Program costs would be expensed on an annual basis, and any program costs that are not recovered in the program year would be recovered in the surcharge through the true-up process. The estimated savings over the 10-year period would be over $150 million. As we contemplate the future of energy efficiency in the State beyond 2023, performance incentives are one avenue by which cost reduction may be sought.

The EmPOWER Program performance has generated questions about the need for incentives in the energy efficiency space in Maryland. The introduction of a performance incentive mechanism has been questioned by stakeholders on the basis that it will increase cost to ratepayers; utilities are already incentivized, and the desired outcomes are being achieved in the Program, among other reasons. Currently, there are areas in the structure of EmPOWER Maryland that can be addressed by a performance incentive mechanism to continue supporting the State's energy efficiency goals by adjusting risk, lowering costs, or increasing benefits to ratepayers, while providing an opportunity for utilities to earn their authorized rate of return. Performance incentive mechanisms can reduce long-run costs to ratepayers and adjust the risk of achieving the energy savings goals by correlating the rate of return received on energy efficiency spending with the attainment of the energy savings goals.

The investigation of the unamortized program costs in EmPOWER was undertaken prior to the spread of the COVID-19 pandemic which has impacted the livelihood of residents and the operations of business in the state of Maryland and across the globe. Preliminary economic indicators suggest that assumptions about electricity consumption and customer growth, among others, may not hold. The extreme and unforeseen circumstances have affected ratepayers' ability to pay utility bills, and that may place cost recovery at risk for the utilities. When additional information about the effects of the pandemic on revenue, rates, and ratepayers' behaviors is available, further assessment of the performance incentive mechanisms and bill analysis may be warranted. Therefore, MEA does not recommend the adoption or implementation of performance incentive mechanisms in the 2021-2023 program cycle of EmPOWER.

INTRODUCTION

MEA has engaged Oculus CAS, LLC ("Oculus") to conduct an analysis of the unamortized program costs that have accrued under the EmPOWER Maryland program since its inception in 2008. Two performance incentive mechanisms for financing the uncollected balance, in the future, are presented, including performance requirements that promote increased efficiency and increased benefits to ratepayers.

EmPOWER was codified by the EmPOWER Maryland Energy Efficiency Act of 2008 to promote energy efficiency and conservation in the State of Maryland, with a specific goal of reducing per capita electricity usage by 15% between 2008 and 2015. In 2017 the Governor and Legislature extended EmPOWER until 2023 with a new set of goals to further energy efficiency and conservation. To achieve its goals, EmPOWER establishes a regulatory framework that coordinates the efforts of Utility Companies toward a set of common goals as they deliver service to residents and businesses. Under the direction of the State of Maryland Public Service Commission, there are presently six (6) Utility Companies[1] (the "EmPOWER Utilities") actively engaged in EmPOWER:

1) Baltimore Gas and Electric ("BGE")
2) Delmarva Power and Light ("DPL")
3) Potomac Edison ("PE")
4) Potomac Electric Power Company ("PEPCO")
5) Washington Gas Light ("WGL")
6) Southern Maryland Electric Cooperative ("SMECO")

MEA plays a critical role in overseeing EmPOWER on behalf of the State of Maryland. MEA regularly coordinates and convenes EmPOWER stakeholders, presents testimony to the Public Service Commission, and conducts analysis to promote continued improvement of EmPOWER. In addition to its role with EmPOWER, MEA oversees a broad range of initiatives on behalf of the State of Maryland, including sustainability, climate change, alternative fuels and technologies, while also providing advice to the Governor, the Legislature, local governments and other State agencies.

The financing necessary to achieve EmPOWER's energy efficiency and conservation goals is provided by the EmPOWER Utilities and recovered through a customer surcharge added to monthly utility bills within the respective utility service areas. When EmPOWER was created in 2008, the program's financing model was designed to <u>minimize</u> the impact of the program's start-up expenses on ratepayers. To that end, the EmPOWER Utilities were directed to self-finance Program Costs through a 5-year amortization structure subject to an approved rate of return on unpaid Program Costs.

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[1] The Maryland Department of Housing and Community Development is designated as the sole provider of energy efficiency programs for limited income ratepayers in each EmPOWER Utility's service area with an allocation of funds based on the number of qualifying ratepayers.

Since the program's inception in 2008, the EmPOWER Utilities have accumulated uncollected program costs of varying amounts associated with achieving the goals of EmPOWER. As of the beginning of 2020, the total unamortized program costs of EmPOWER was over $822 million.

In early 2019, the Public Service Commission invited MEA to co-lead the Cost Recovery Work Group with the mandate to examine: "1) the appropriate rate of return for the EmPOWER programs; 2) the potential surcharge and ratepayer impacts of adjusting the amortization period for a portion of or 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."[2]

The Cost Recovery Work Group included representatives of MEA, the EmPOWER Utilities, staffs of the Public Service Commission and the Office of People's Counsel, and other Stakeholders to examine financing models, incentives, and other mechanisms to minimize costs of energy efficiency investments in preparation for the 2021-2023 EmPOWER program cycle. A key assumption of this analysis presented herein is that the EmPOWER program or some other form of utility-administered energy efficiency program continues by law beyond the 2023 time frame. The report analyzes the impact of different approaches to handling the uncollected program costs and future program costs over a 10-year period.

[2] see PSC Case 9494, Mail Log #223596, January 15, 2019.

I. IDENTIFICATION OF THE UNAMORTIZED EmPOWER BALANCE

Table I-A lists the 2020 EmPOWER Tariff filings with the Public Service Commission from each of the six (6) EmPOWER Utilities were reviewed.

Table I-A

Utility Financial Data - PSC Filings - Case 9494			
PSC Item	**PSC Maillog**	**Utility**	**Date**
171	227417	Washington Gas	11/18/2019
174	227502	PEPCO	11/15/2019
175	227501	DP&L	11/15/2019
177	227606	SMECO	11/22/2019
179	227637	Potomac Edison	11/25/2019
181	227547	BGE	11/18/2019

The data in the filings were used to create a profile of the current financial structure of the EmPOWER program for each of the EmPOWER Utilities. Since each of the EmPOWER Utilities submits Tariff filings in a different format, it is necessary to create a consistent format for presenting and analyzing this information in a summarized fashion.

Table I-B below provides a Summary of the Unamortized Balance as well as other key program metrics for calendar year 2020 based on the Tariff filings.

Table I-B

2020 EmPower Summary: Residential and Commercial					
Utility	**Program Cost**	**Amortization**	**Unamortized Balance**	**Return to Utility**	**WACC/Rate of Return**
BGE	$ 107,630,501	$ 101,362,026	$ 329,929,427	$ 22,741,534	9.51%
DPL	$ 27,487,526	$ 20,173,758	$ 57,827,006	$ 3,591,057	8.57%
PEPCO	$ 79,106,442	$ 67,987,733	$ 191,575,983	$ 12,892,619	9.29%
PE	$ 51,005,647	$ 30,945,308	$ 157,131,195	$ 10,354,946	9.09%
SMECO	$ 24,436,952	$ 19,036,473	$ 53,510,693	$ 3,274,854	6.12%
WGL	$ 11,451,160	$ 5,004,181	$ 32,433,352	$ 2,261,440	9.62%
Totals	**$ 301,118,228**	**$ 244,509,479**	**$ 822,407,656**	**$ 55,116,450**	**9.25%**

<u>The Unamortized Balance across all six (6) EmPOWER Utilities is estimated at $822,407,656 as of the beginning of calendar year 2020.</u>

The table above is a summary extracted from a series of seven (7) spreadsheets included in this report. There is one spreadsheet for each of the six (6) EmPOWER Utilities, and a summary spreadsheet that combines key metrics to present a complete picture of EmPOWER. <u>These spreadsheets are included as Appendix 1 to this report.</u>

The spreadsheets in Appendix 1 establish a baseline year from which future year projections/options discussed later in this Report were extrapolated. The spreadsheet format provides the ability to easily adjust assumptions and evaluate the financial impact of various restructuring options.

The Table I-C below provides an overview of the key data points in each spreadsheet.

Table I-C

Column Title	**Description and Discussion**
Year	2020 is the baseline year. Data is based on Tariff filings from late 2019 by utilities as referenced in each spreadsheet
Program Cost	Estimated cost for all program activities in 2020. Annual Costs are estimated at the beginning of the year. Since costs are estimates, actual costs will vary. Projections of Program Costs beyond 2020 will vary based upon individual scenarios. The analysis assumes that program costs will remain at 2020 estimated levels for future years.
Amortization	As a general matter, it is assumed that 1/5 of each year's approved Program Cost (including the Current Year) is to be amortized in the Current Year; however, practical implementation may not allow 1/5 of each year's program costs to be amortized annually for each utility. Utilities have differing approaches to detailing amortization of costs in their Tariff filings. Ratepayers are obligated to cover Amortization in the Current Year, not the entire Program Cost for the Current Year. This can lead to distortions between Amortization and Program Cost, with Amortization generally being lower than Program Cost, in which case the Unamortized Balance typically increases on a year-over-year basis.
Unamortized Balance	Presented with balance as of beginning of year, and reflects cumulative uncollected program costs carried by each Utility. The Unamortized Balance reflects the cumulative differential between historical Program Costs and Amortization. Projections going forward are calculated as follows: **[(Prior Year Unamortized Balance) + (Current Year Program Costs) – (Current Year Amortization)]**
Return to Utility	Utilities' Return is calculated as follows: **[(Unamortized Balance) * (WACC/Rate of Return) * (72.48%)]** The percentage multiplier adjusts return to utilities based on current Federal and State tax rates to capture the impact of deferred taxes on the Unamortized Balance. That is, the future tax obligations of ratepayers are removed prior to the calculation of returns.
Utility WACC / Rate of Return	Presented on a pre-tax basis. Varies by Utility. The applicable Federal and State combined tax rate is presented in each spreadsheet. WACC (Weighted Average Cost of Capital) is approved by the Public Service Commission for utilities and is equal to the approved Rate of Return for EmPOWER programs. In the analysis presented herein (see Section VI), the Rate of Return is adjusted and differs from the WACC.
Net Operating Costs (Current Year Expense)	Some EmPOWER Utilities offer Demand Response Programs that operate in an "expensing mode" where current year operating costs are included in the

	calculation of required Ratepayer Revenues. While these are technically a type of program cost, they are presented separately due to the differing reporting associated with these initiatives. Based on a review of Tariff filings, the EmPOWER Utilities with Demand Response Programs presented in this fashion are BGE, DP&L, PEPCO, and SMECO.
Federal Tax Credit	Several EmPOWER Utilities' Tariff filings indicate tax credits for future years which act to reduce the revenue necessary from Ratepayers. These tax credits are assumed to end at future dates as noted in respective Tariff filing.
Wholesale Revenue	Several EmPOWER Utilities' Tariff filings indicate additional revenue from various sources such as PJM, etc. which act to reduce the revenue necessary from Ratepayers. The analysis assumes these revenues will remain at 2020 estimated levels for future years.
True Up	EmPOWER Utilities make adjustments to correct imbalances due to actuals varying from projections for Program Costs, Ratepayer Revenues, etc. each year. The True-up process is expected to continue going forward. In the performance incentive mechanisms, the True Ups are used to reconcile performance and incentives
Ratepayer Revenue Requirement	Total revenue that must be paid each year by ratepayers towards Amortization, Net Operating Costs, and Return to Utility, with adjustments made for Federal Tax Credits, Wholesale Revenue, and True Up. Formula is as follows: **[(Amortization) + (Return to Utility) + (Net Operating Costs) – (Federal Tax Credits) – (Wholesale Revenue) +/ – (True Up)]**
Projected Sales (kWh / Therm)	Projected total electricity sales or gas sales (in the case of WG&L) are based on 2020 Utility Company estimates. Projections beyond 2020 assume that Sales will remain flatlined due to balancing impact of: 1) increasing energy efficiency versus 2) increasing population and household/business formation.
Ratepayer Surcharge	Surcharge per kWh or Therm (for WG&L) associated with EmPOWER program per year. Formula is as follows: **[(Ratepayer Revenue) / {Projected Sales)]**
Average Usage/Month per Ratepayer	For consistency across all EmPOWER Utilities, it is assumed that ratepayers will use 1,000 kWh per month. This is a midpoint in the range of assumptions included in the various Tariff filings. Assumption for WG&L gas accounts is 120 Therms per month based on total number of residential and commercial accounts. Note: as indicated above, it is assumed that actual per ratepayer consumption will decline in future years, but will be offset by new household/business formation. Accordingly, the average per month figure in this analysis is held constant to allow for easier analysis of various options, and should not be viewed as an assumption of actual per household energy usage on a year-over-year basis.
Estimated Monthly Bill Impact per Ratepayer	By applying the Ratepayer Surcharge to the average consumption, a monthly estimate of billings impacts associated with the EmPOWER program is derived. Formula is as follows: **[(Ratepayer Surcharge) * (Average Usage/Month per Ratepayer)]**
Estimated Annual Bill Impact per Ratepayer	The Monthly Bill Impact is multiplied to reflect an annual impact figure for the EmPOWER program. Formula is as follows: **[(Estimated Monthly Bill Impact per Ratepayer) * (12)]**

II. CURRENT PROGRAM COST STRUCTURE EFFECTIVENESS EVALUATION

Maryland's EmPOWER Program receives high marks at the national level for its energy efficiency and conservation outcomes. ACEEE's "2019 State Energy Efficiency Scorecard" issued in October 2019 placed Maryland in the top 10 nationwide. ACEEE's report noted:

> *"Maryland is this year's most improved state. Utility efficiency programs, delivered through the EmPOWER Maryland initiative, have steadily evolved in recent years, spurred by robust legislative savings targets."*

Within the context of this robust programmatic performance, this report examines the financial structure of EmPOWER with a specific focus on the unamortized program costs that have accrued during the program's tenure.

MEA, the Public Service Commission, the Office of People's Counsel and other stakeholders all play an important role in ensuring that EmPOWER's goals are met, and have done an excellent job by most measures in terms of program performance. A similar level of attention to the financial structuring and incentives of EmPOWER appears to be a prudent area for increased focus.

<u>EmPOWER's Financial Structure and Incentives</u>

EmPOWER's financial structure is relatively unique. The long-standing use of an Amortization model for financing Program Costs is shared with only a few other States (Illinois, New Jersey, New York and Utah). Amortization is the Cost Recovery model used by EmPOWER Utilities to recover their investments in energy efficiency and conservation. As detailed above, the ratio of uncollected program costs to annual Program Cost for EmPOWER is rapidly approaching 3:1.

The most obvious deficiency in the current Amortization model is that there is no mechanism built into the program to repay the Unamortized Balance. Also, there is no direct relationship between the Revenue realized by the EmPOWER Utilities and the energy efficiency/conservation outcomes of the EmPOWER program. Therefore, while EmPOWER's program outcomes are robust, they are being achieved without a feedback mechanism to their long-term cost.

While EmPOWER could theoretically transition to an expensing mode whereby annual Program Costs are paid entirely from current year's Ratepayer Revenues, this would be an extensive and expensive process. The existing Unamortized Balance would need to be repaid, and a new model for delivering a return to the Utilities would need to be accepted by all parties. As a side note, the Demand Response Program component of EmPOWER (which makes up a small portion of overall activity) is already performing in an expensing mode for several of the EmPOWER Utilities.

Performance-Based Incentives

EmPOWER's program design does not include a performance-based incentive component. And while there is little consensus to be found among the primary stakeholders in the Cost Recovery Work Group, the one area where they generally coalesce is the value of exploring performance-based incentives. While the statutory framework of EmPOWER creates strong performance goals, there is no financial incentive built into the program to reward/penalize EmPOWER Utilities for their overall level of performance.

As noted above, there is no linkage between the energy efficiency and conservation outcomes and the return earned by the EmPOWER Utilities. Preservation of this revenue decoupling feature of the program is arguably quite important, as it removes the incentive for the EmPOWER Utilities to promote increased energy usage or, even worse, punish efficiency measures. That said, an energy efficiency program that operates without regard to performance could run afoul of its own set of unintended consequences.

The States that generally receive higher rankings from ACEEE than Maryland all have performance-based incentive structures, though it is also true that many States that rank worse than Maryland also have such incentive structures. As a starting point, three (3) States have performance-based experiences that are worth further examination: 1) Illinois, 2) New Jersey, and 3) Massachusetts.

Illinois allows utilities to realize a return on unrecovered costs (like Maryland). The performance incentivize element of the Illinois approach applies a Rate of Return / WACC on the unrecovered cost. Specifically, the return on equity (ROE) component of the Rate of Return / WACC is adjusted as summarized in the table below prepared by ACEEE. Each utility operates with a separate structure that incentivizes performance based on percentage achievement of pre-set goals.

Chart II-A

Return on equity for achievement of energy efficiency goals

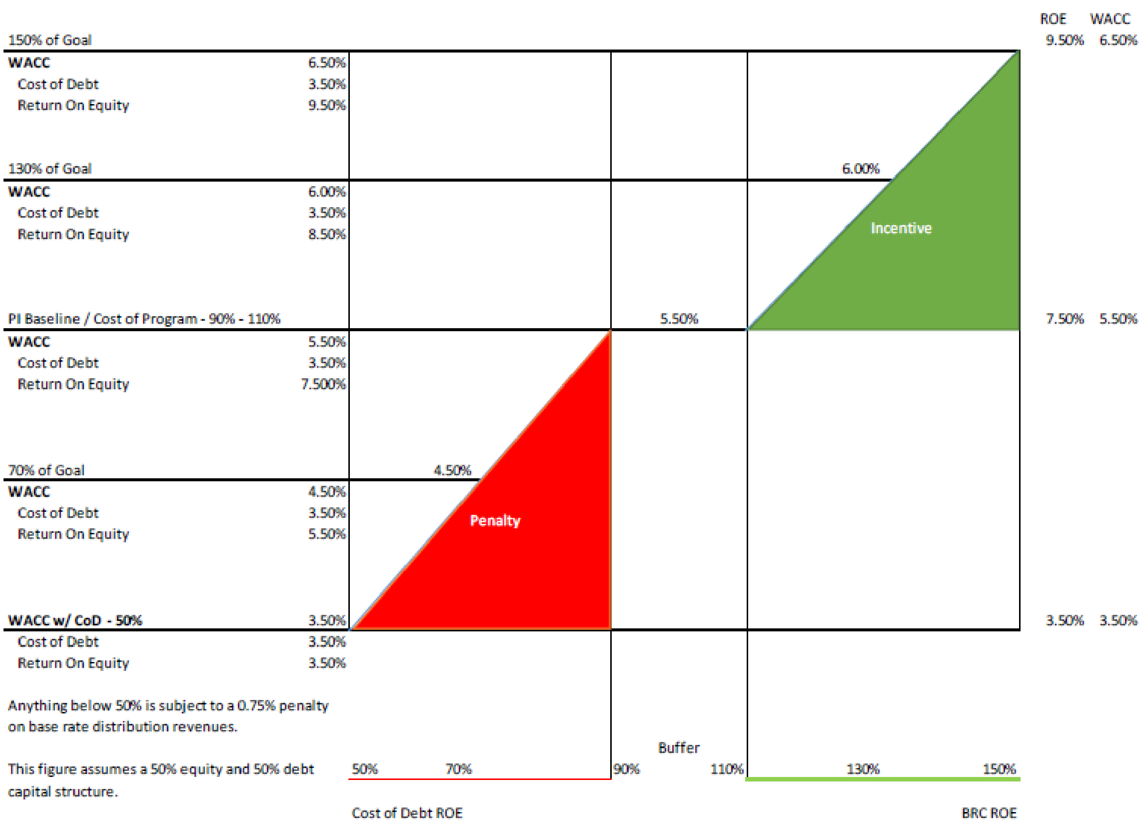
Utility	Percentage of goal achieved	ROE	Percentage of goal achieved	ROE
Years	2018-2025		2026-2030	
ComEd	≤75%	Minus 200 basis points	≤ 66%	Minus 200 basis points
	More than 75%, less than 100%	Minus 8 basis points per % below goal	More than 66%, less than 100%	Minus 8 basis points per % below goal
	100% or more, less than 125%	Plus 8 basis points per % above goal	100% or more, less than 134%	Plus 8 basis points per % above goal
	≥125%	Plus 200 basis points	≥ 134%	Plus 200 basis points
Ameren	≤ 84.4%	Minus 8 basis points per % below goal	<100%	Minus 6 basis points per % below goal
	More than 84.4%, but less than 100%	No change in basis points	100%	No change in basis points
	≥100%	Plus 8 basis points per % above goal	>100%	Plus 6 basis points per % above goals

Basis point reductions and increases are capped at 200 in all the cases presented above.

***Source**: Rachel Gold, ACEEE Letter to Maryland Public Service Commission, April 26, 2019. ML: 224954*

In January 2020, the New Jersey Board of Public Utilities (NJBPU) released "Energy Efficiency Transition: Cost Recovery Mechanism Draft" for public and stakeholder comment, and issued a final order on June 10, 2020[3]. Like Illinois and Maryland, New Jersey is one of the few States which permit a return on unrecovered costs. The release of this draft is the latest step by the NJBPU to add a performance-based mechanism to their energy efficiency programs. While New Jersey does not rank as highly as Maryland in ACEEE's Scorecard rankings, their exploration of a performance-based incentive structure offers an opportunity for Maryland to observe a transition in progress. As illustrated below, New Jersey is exploring options to set the Rate of Return / WACC realized by the Utilities in a manner that is reflective of achieving performance goals.

Chart II-B



***Source**: "New Jersey Board of Public Utilities – Energy Efficiency Transition: Cost Recovery Mechanism Draft – Draft for Public Comment, January 22, 2020. Page 9, Figure 2.*

Massachusetts, which regularly rates near the top of ACEEE's Scorecard, operates with both broad energy efficiency reduction goals (like EmPOWER) as well as a financial incentive pool that is distributed

[3] Full order available at: https://www.nj.gov/bpu/pdf/boardorders/2020/20200610/8D--Order%20Directing%20the%20Utilities%20to%20Establish%20Energy%20Efficiency%20and%20Peak%20Demand%20Reduction%20Programs.pdf

to utilities based on their ability to achieve specific policy objectives[4]. During the 2016-2018 period, $100 million was set aside (approximately 5% of total program expenses) for distribution for achieving electricity savings goals, and $18 million (3% of total program expenses) for gas savings goals. ACEEE has noted that these incentive pools have resulted in an increased focus on energy efficiency as a core corporate priority. New priorities have been established for the 2019-2021 program years.

Rate of Return / WACC

The return earned by the EmPOWER Utilities is an area of extensive back-and-forth among members of the Cost Recovery Work Group. While there may be near consensus around pursuing a performance-based incentive structure, there appears to be little alignment on the topic of making changes to the Rate of Return / WACC.

The position of the EmPOWER Utilities on this topic is simple: the Status Quo is working. The program is delivering strong outcomes, so any changes to the financial incentives built into EmPOWER risk upending Maryland's programmatic outperformance.

That said, the financial benefits of the program to the EmPOWER Utilities are undeniable. With annual cumulative returns generated at their approved Rate of Return / WACC in excess of $50 million (after taxes) stretching into the future, the EmPOWER Utilities would, arguably, be acting counter to their obligation to shareholders if they were to unilaterally agree to a reduction in return on energy efficiency investments without the appropriate incentives or opportunities to earn additional returns.

The opportunity to earn the of Rate of Return / WACC on the Unamortized Balance on a year-to-year basis is certainly a powerful incentive for the EmPOWER Utilities to continue to pay attention to EmPOWER, though this attention likely does not extend to pursuing efforts to reduce the Unamortized Balance.

[4] There are notable differences in the structure of the programs in Massachusetts; namely, statewide implementation and mandated performance incentives.

III. COST RECOVERY WORK GROUP EXAMINATION

The Public Service Commission invited MEA to co-lead the Cost Recovery Work Group with the mandate to examine: "1) the appropriate rate of return for the EmPOWER programs; 2) the potential surcharge and ratepayer impacts of adjusting the amortization period for a portion of or 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."[5]

The Cost Recovery Work Group included representatives of MEA, the EmPOWER Utilities, staffs of the Public Service Commission and the Office of People's Counsel to examine financing models, incentives and other mechanisms to minimize costs of energy efficiency investments in preparation for the 2021-2023 EmPOWER program cycle. As noted above, a key assumption of this analysis is that the EmPOWER program or some other form of utility-administered energy efficiency program continues by law beyond the 2023 timeframe. Due to the COVID-19 pandemic, MEA does not recommend the adoption or implementation of performance incentive mechanisms in the 2021-2023 program cycle of EmPOWER.

The Cost Recovery Work Group issued a report on April 15, 2019. It is important to note that the scope of the EmPOWER financial analysis included in the April 15, 2019 Work Group report is more narrowly focused than the analysis presented in this report. Specifically, the analysis presented herein includes the following additional information which was not included in the Work Group's analysis:

- Washington Gas and Light data
- Commercial and Industrial data
- Demand Response Programs data

The inclusion of this additional financial data is material. For instance, the overall unamortized balance of program costs associated with the EmPOWER Utilities in the Work Group analysis was approximately $280 million, while (as noted above) this analysis identifies a total unamortized balance of program costs of nearly $822 million. The totals of other key metrics (i.e. Program Costs, Utility Revenues, Ratepayer Surcharges, etc.) are also higher.

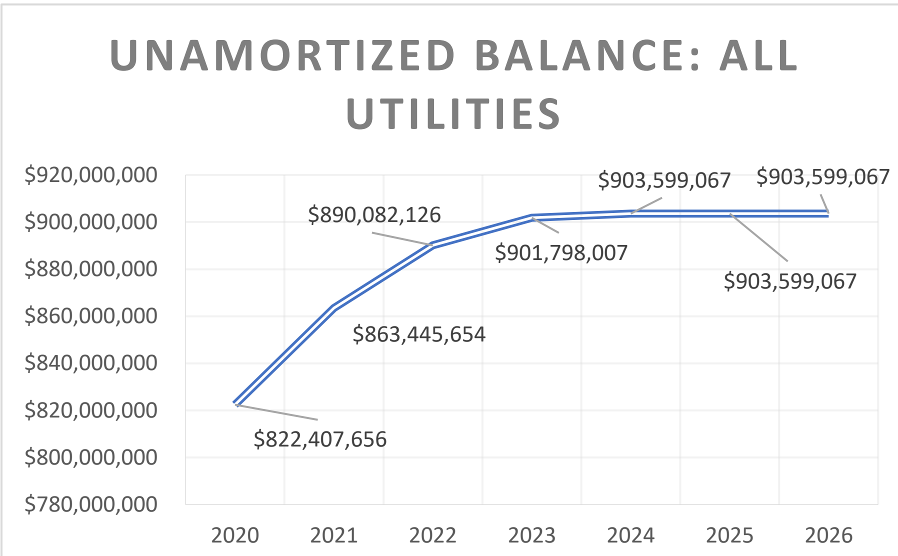
The Cost Recovery Work Group Report detailed three (3) primary options for restructuring the EmPOWER unamortized program costs. On the pages that follow is a summary, update and assessment of these alternatives based on the review of the current Tariff filings.

[5] see PSC Case 9494, Mail Log #223596, January 15, 2019.

<u>Cost Recovery Work Group: Option 1</u> -- Maintain the financial structure of EmPOWER in its current form. This is also referred to as the Status Quo option.

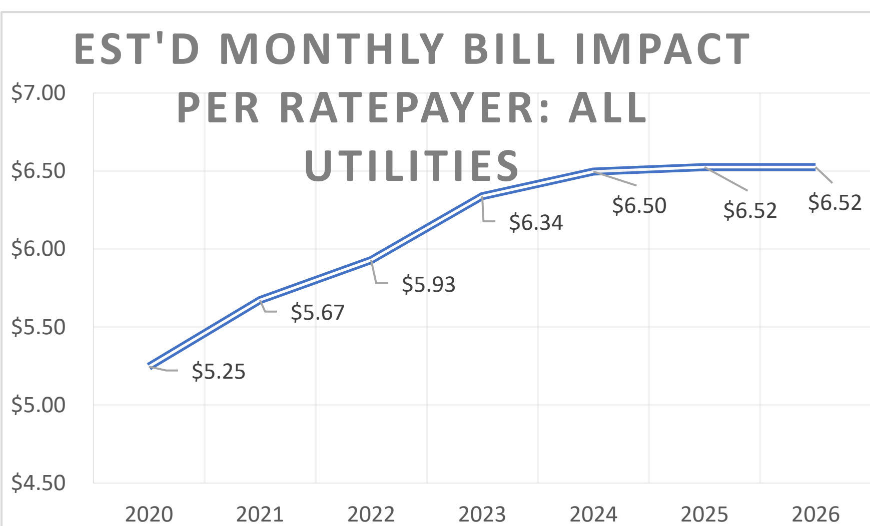
Baseline 2020 data is projected forward using existing protocols and assumptions. In this analysis, it is assumed that Program Costs and Amortization will achieve equilibrium within several years and EmPOWER will stabilize with the Unamortized Balance and Ratepayer Impact reaching a plateau by 2025. The graphs below illustrate this trend.

Graph III-A



This approach maintains the status quo with an important assumption that EmPOWER stakeholders will bring annual Program Costs into parity with annual Amortization of uncollected program costs. In past years, the steady increase in the Unamortized Balance over the years is the result of the misalignment of Program Costs and Amortization. This approach results in a steady increase in Unamortized Balance and Ratepayer surcharges in the years ahead, reaching a plateau of $903 million and $6.52 per month, respectively.

Graph III-B



Going forward, this approach continues to enable the Utilities to earn a Return on the balance of Unamortized program costs at their established Rate of Return/WACC. The cumulative sum of this Rate of Return is significantly higher than alternatives. There is no effort to reduce the Unamortized Balance in this option. The attached spreadsheet illustrates further details of this option.

All EmPower Utilities

Utility Financial Data - PSC Filings - Case 9494			
PSC Item	**PSC Maillog**	**Utility**	**Date**
171	227417	WG&L	11/18/2019
174	227502	PEPCO	11/15/2019
175	227501	DP&L	11/15/2019
177	227606	SMECO	11/22/2019
179	227637	Potomac Ed	11/25/2019
181	227547	BGE	11/18/2019

Utility	WACC/Rate of Return
WG&L	9.62%
PEPCO	9.29%
DPL	8.57%
SMECO	6.12%
Potomac Ed	9.09%
BGE	9.51%

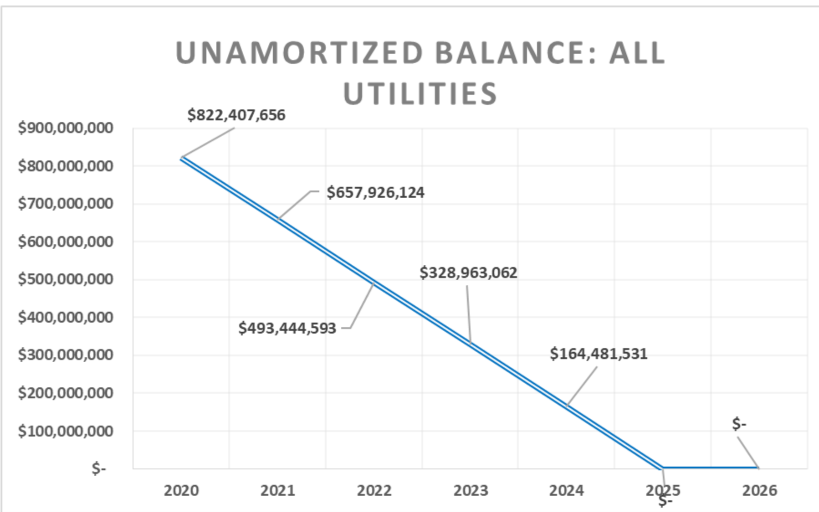
Option 1: Status Quo Work Group Proposal Updated

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year	**Program Cost**	**Amortization**	**Unamortized Balance (Prior)+(2)-(3)**	**Return to Utility (4)*(6)* (.7248)**	**Imputed Utility WACC / Rate of Return**	**Net Operating Costs (Current Year Expense)**	**Federal Tax Credit**	**Wholesale Revenue**	**True Up**	**Ratepayer Revenue Requirement (12) * (13)**	**Estimated Monthly Bill Impact per Ratepayer**	**Estimated Annual Bill Impact per Ratepayer**
2020	$ 301,118,228	$ 244,509,479	$ 822,407,656	$ 55,116,450	9.25%	$ 70,324,473	$ (10,127,799)	$ (11,219,529)	$ (8,670,185)	$ 331,348,401	$ 5.25	$ 62.95
2021	$ 301,118,228	$ 260,080,230	$ 863,445,654	$ 57,826,550	9.24%	$ 70,324,473	$ (10,127,799)	$ (11,219,529)	$ -	$ 358,299,435	$ 5.67	$ 68.07
2022	$ 301,118,228	$ 274,481,756	$ 890,082,126	$ 59,583,595	9.24%	$ 70,324,473	$ (10,127,799)	$ (11,219,529)	$ -	$ 374,458,007	$ 5.93	$ 71.14
2023	$ 301,118,228	$ 289,402,347	$ 901,798,007	$ 60,352,973	9.23%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 400,275,774	$ 6.34	$ 76.05
2024	$ 301,118,228	$ 299,317,168	$ 903,599,067	$ 60,471,663	9.23%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 410,309,286	$ 6.50	$ 77.95
2025	$ 301,118,228	$ 301,118,228	$ 903,599,067	$ 60,471,663	9.23%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 412,110,346	$ 6.52	$ 78.30
2026	$ 301,118,228	$ 301,118,228	$ 903,599,067	$ 60,471,663	9.23%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 412,110,346	$ 6.52	$ 78.30
2027	$ 301,118,228	$ 301,118,228	$ 903,599,067	$ 60,471,663	9.23%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 412,110,346	$ 6.52	$ 78.30
2028	$ 301,118,228	$ 301,118,228	$ 903,599,067	$ 60,471,663	9.23%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 412,110,346	$ 6.52	$ 78.30
2029	$ 301,118,228	$ 301,118,228	$ 903,599,067	$ 60,471,663	9.23%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 412,110,346	$ 6.52	$ 78.30
2030	$ 301,118,228	$ 301,118,228	$ 903,599,067	$ 60,471,663	9.23%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 412,110,346	$ 6.52	$ 78.30
10 Year Total				$ 601,064,755						$ 4,016,004,576	$ 6.26	

<u>Cost Recovery Work Group: Option 2</u> -- OPC Staff proposed eliminating the Unamortized Balance and migrating EmPOWER to an "expensing mode" whereby any amortization of current year Program Costs is eliminated. OPC proposed a 5-year plan for paying off the -uncollected program costs. Additionally, OPC proposed a significant reduction in Utility returns by reducing the Rate of Return from a weighted average of approximately 9% to 4%. (Note: OPC Staff updated their recommendation in early 2020 in light of the impact of the COVID-19 pandemic and is currently working on additional analysis, though the original recommendation is retained in this report to establish a working baseline for comparison.)

Changing the Rate of Return to the EmPOWER Utilities does not reduce the Unamortized Balance any faster, though it does have an impact on the annual Ratepayer Surcharge due to the significant decrease in returns to the utilities.

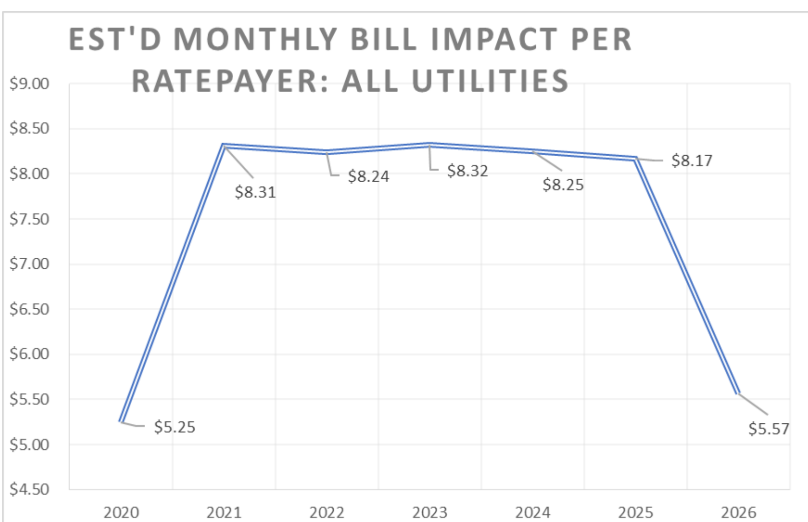
Graph III-C



The reduction in the Rate of Return / WACC to 4.0% from a range of 6.12% - 9.62% would be viewed quite negatively by the EmPOWER Utilities. Additionally, with the elimination of Unamortized Balance , the Return to Utilities reduces to zero after several years.

Due to the accelerated repayment of Unamortized Balance the Monthly Ratepayer surcharge during the paydown years goes up to $8.32/month in 2023 versus the 2020 estimate of $5.25 / month, an increase of nearly 60%.

Graph III-D



After pay down of all Unamortized Balance in 2026, the Monthly Ratepayer surcharge drops dramatically to $5.57/month. The Monthly Ratepayer surcharge is higher in 2026 than in 2020 (despite the elimination of the Return to Utilities) due to the fact that Amortization was significantly below Program Costs in 2020 and the expiration of Federal Tax Credits.

The attached spreadsheet illustrates further details of this option.

All EmPower Utilities

Utility Financial Data - PSC Filings - Case 9494

PSC Item	PSC Maillog	Utility	Date
171	227417	WG&L	11/18/2019
174	227502	PEPCO	11/15/2019
175	227501	DP&L	11/15/2019
177	227606	SMECO	11/22/2019
179	227637	Potomac Ed	11/25/2019
181	227547	BGE	11/18/2019

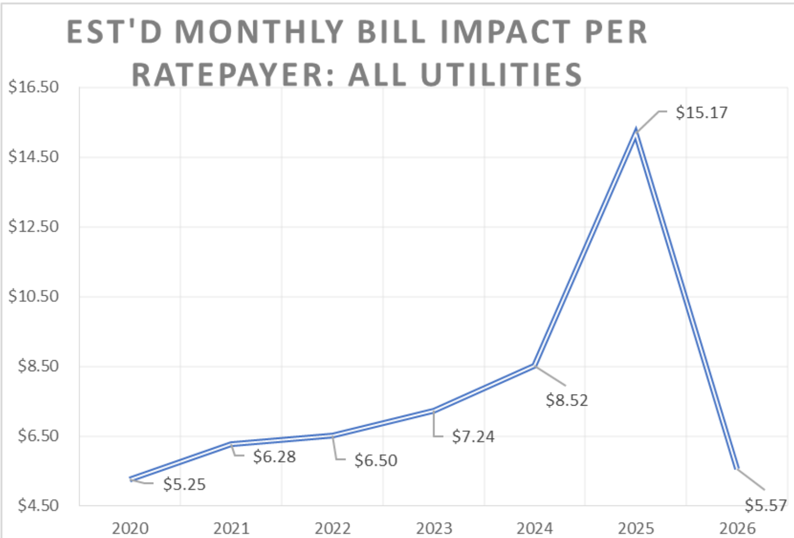
Utility	WACC/Rate of Return
WG&L	9.62%
PEPCO	9.29%
DPL	8.57%
SMECO	6.12%
Potomac Ed	9.09%
BGE	9.51%

Option 2: OPC Work Group Proposal Updated

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year	Program Cost	Amortization	Unamortized Balance (Prior)+(2)-(3)	Return to Utility (4)*(6)*(.7248)	Imputed Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (12) * (13)	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 301,118,228	$ 244,509,479	$ 822,407,656	$ 55,116,450	9.25%	$ 70,324,473	$ (10,127,799)	$ (11,219,529)	$ (8,670,185)	$ 331,348,401	$ 5.25	$ 62.95
2021	$ 301,118,228	$ 465,599,759	$ 657,926,124	$ 19,096,341	4.00%	$ 70,324,473	$ (10,127,799)	$ (11,219,529)	$ -	$ 525,088,756	$ 8.31	$ 99.76
2022	$ 301,118,228	$ 465,599,759	$ 493,444,593	$ 14,322,256	4.00%	$ 70,324,473	$ (10,127,799)	$ (11,219,529)	$ -	$ 520,314,671	$ 8.24	$ 98.85
2023	$ 301,118,228	$ 465,599,759	$ 328,963,062	$ 9,548,170	4.00%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 525,668,385	$ 8.32	$ 99.87
2024	$ 301,118,228	$ 465,599,759	$ 164,481,531	$ 4,774,085	4.00%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 520,894,299	$ 8.25	$ 98.96
2025	$ 301,118,228	$ 465,599,759	$ -	$ -	4.00%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 516,120,214	$ 8.17	$ 98.06
2026	$ 301,118,228	$ 301,118,228	$ -	$ -	4.00%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 351,638,683	$ 5.57	$ 66.81
2027	$ 301,118,228	$ 301,118,228	$ -	$ -	4.00%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 351,638,683	$ 5.57	$ 66.81
2028	$ 301,118,228	$ 301,118,228	$ -	$ -	4.00%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 351,638,683	$ 5.57	$ 66.81
2029	$ 301,118,228	$ 301,118,228	$ -	$ -	4.00%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 351,638,683	$ 5.57	$ 66.81
2030	$ 301,118,228	$ 301,118,228	$ -	$ -	4.00%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 351,638,683	$ 5.57	$ 66.81
10 Year Total			$ -	$ 47,740,852						$ 4,366,279,740	$ 6.76	

<u>Cost Recovery Work Group: Option 3</u> -- PSC Staff raised the option of a more gradual transition to an "expensing mode" with a gradual increase in the rate of Amortization from over a 5-year period (i.e. a Declining Amortization Schedule) to a point where the program costs are recovered on an annual basis.

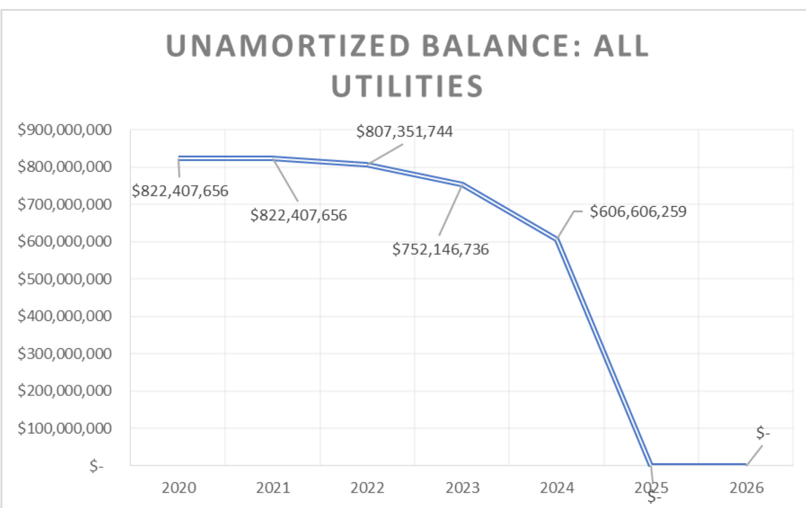
Graph III-E



This proposal is somewhat similar to the OPC option, with a notable difference that the Utility Rate of Return is not reduced in the PSC Staff proposal.

The Unamortized Balance is paid down in a similar timeframe as the Cost Recovery Work Group: Option 2, but the rate of repayment increases dramatically in 2025. Due to the accelerated repayment of Unamortized Balance, the impact on the Monthly Ratepayer surcharge is significant during the paydown years, with a spike in 2025 when the program makes a transition to expensing mode. In 2025, the Ratepayer surcharge increases to $15.17/month from $8.52/month the year before, an increase of 78%.

Graph III-F



After pay down of all Unamortized Balance in 2026, the Monthly Ratepayer surcharge drops dramatically to $5.57/month. The Monthly Ratepayer surcharge is higher in 2026 than in 2020 (despite the elimination of the Return to Utilities) due to the fact that Amortization was significantly below Program Costs in 2020 and the expiration of Federal Tax Credits.

The attached spreadsheet illustrates further details of this option.

All EmPower Utilities

Utility Financial Data - PSC Filings - Case 9494

PSC Item	PSC Maillog	Utility	Date
171	227417	WG&L	11/18/2019
174	227502	PEPCO	11/15/2019
175	227501	DP&L	11/15/2019
177	227606	SMECO	11/22/2019
179	227637	Potomac Ed	11/25/2019
181	227547	BGE	11/18/2019

Utility	WACC/Rate of Return
WG&L	9.62%
PEPCO	9.29%
DPL	8.57%
SMECO	6.12%
Potomac Ed	9.09%
BGE	9.51%

Option 3: PSC Staff Work Group Proposal Updated

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year	Program Cost	Amortization	Unamortized Balance (Prior)+(2)-(3)	Return to Utility (4)*(6)*(.7248)	Imputed Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (12) * (13)	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 301,118,228	$ 244,509,479	$ 822,407,656	$ 55,116,450	9.25%	$ 70,324,473	$ (10,127,799)	$ (11,219,529)	$ (8,670,185)	$ 331,348,401	$ 5.25	$ 62.95
2021	$ 301,118,228	$ 301,118,228	$ 822,407,656	$ 55,116,450	9.25%	$ 70,324,473	$ (10,127,799)	$ (11,219,529)	$ -	$ 396,627,334	$ 6.28	$ 75.35
2022	$ 301,118,228	$ 316,174,139	$ 807,351,744	$ 54,111,215	9.25%	$ 70,324,473	$ (10,127,799)	$ (11,219,529)	$ -	$ 410,678,010	$ 6.50	$ 78.02
2023	$ 301,118,228	$ 356,323,236	$ 752,146,736	$ 50,425,350	9.25%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 457,269,041	$ 7.24	$ 86.87
2024	$ 301,118,228	$ 446,658,705	$ 606,606,259	$ 40,708,070	9.26%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 537,887,230	$ 8.52	$ 102.19
2025	$ 301,118,228	$ 907,724,487	$ -	$ -	9.25%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 958,244,942	$ 15.17	$ 182.05
2026	$ 301,118,228	$ 301,118,228	$ -	$ -	9.25%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 351,638,683	$ 5.57	$ 66.81
2027	$ 301,118,228	$ 301,118,228	$ -	$ -	9.25%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 351,638,683	$ 5.57	$ 66.81
2028	$ 301,118,228	$ 301,118,228	$ -	$ -	9.25%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 351,638,683	$ 5.57	$ 66.81
2029	$ 301,118,228	$ 301,118,228	$ -	$ -	9.25%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 351,638,683	$ 5.57	$ 66.81
2030	$ 301,118,228	$ 301,118,228	$ -	$ -	9.25%	$ 70,324,473	$ -	$ (11,219,529)	$ -	$ 351,638,683	$ 5.57	$ 66.81
10 Year Total			$ -	$ 200,361,085						$ 4,518,899,973	$ 6.98	

Work Group Efforts in 2020

The Cost Recovery Work Group convened throughout the first half of 2020 continuing efforts to examine financing models, performance incentives, and other mechanisms to minimize costs of energy efficiency investments in preparation for the 2021-2023 EmPOWER program cycle. The Cost Recovery Work Group included representatives of MEA, the EmPOWER Utilities, staffs of the Public Service Commission and the Office of People's Counsel, and Advocates.

The Work Group submitted a report to the Public Service Commission on August 14, 2020. The report provided updated positions of the stakeholders on the appropriate rate of return, amortization period, and performance incentive mechanisms; among other topics. Since the report was issued, MEA continued the investigation of performance incentive mechanisms and does not recommend the adoption or implementation of performance incentive mechanisms in the 2021-2023 program cycle of EmPOWER.

The Work Group agreed to address amortization of the Behavior Programs and Utility Administrative costs.[6] EmPOWER Utilities have proposed to recover the Behavior Program and Utility Administrative costs in the year incurred instead of collecting the costs over five years in the 2021-2023 EmPOWER Cycle Plans.[7]

[6] Staff of the Public Service Commission - EmPOWER Cost Recovery Work Group Report EmPOWER Maryland Plans Case No. 9494 (ML 231480)
[7] Maryland Public Service Commission Case No. 9648: THE 2021-2023 EMPOWER MARYLAND PROGRAM

IV. OPTIONS

This section of the report will build upon the three (3) options discussed in the previous section by presenting additional options for financing the Unamortized Balance associated with EmPOWER.

Options 1, 2 and 3 -- Comparing the Status Quo, OPC and PSC Proposals

To set the stage for the additional options, Table IV-A below summarizes some of the key metrics associated with the three (3) options presented in the previous section.

Table IV-A

	CRWG Report Options		
	1	2	3
	Status Quo	OPC	PSC
Avg. Utility Return per Year	$ 60,106,475	$ 4,774,085	$ 20,036,108
Opportunity to Earn WACC	9.23%	4.00%	9.23%
Avg. Ratepayer Surcharges per Year	$ 401,600,458	$ 436,627,974	$ 451,889,997
Unamortized Balance/Debt in 2030	$ 903,599,067	$ -	$ -
Maximum RatePayer Impact (month)	$ 6.52	$ 8.32	$ 15.17
10-Year Avg Ratepayer Impact (month)	$ 6.26	$ 6.76	$ 6.98
RatePayer Impact in 2030 (month)	$ 6.52	$ 5.57	$ 5.57

A few highlights worth noting:

Status Quo: This option avoids dramatic changes to Ratepayer Surcharges that lead to rate spikes and delivers the lowest average Ratepayer Impact over the 10-year period. However, the Unamortized Balance remains high and is an ongoing burden for Ratepayers. Additionally, the 10-year stream of Utility Revenue is well above the other options.

OPC: This option repays 100% of Unamortized Balance. The Ratepayer Impact is moderated by a more than 50% cut in the Utility Rate of Return, but the average monthly impact over the 10-year period remains higher than the Status Quo.

PSC Staff: This option also repays 100% of Unamortized Balance. The Ratepayer Impact is the most pronounced with a significant spike and the highest average of the 10-year period.

Based on the review of the Status Quo, OPC and PSC Staff options, several principles are identified to inform additional options:

Principle 1. Ratepayer spikes can be somewhat mitigated through the use of a 10-year timeframe (versus the 5-year timeframes used in the OPC and PSC Staff options) when repaying Unamortized Balance.

Principle 2. A broader series of options for reduction in Utility Rate of Return should be explored.

Principle 3. The incorporation of a Performance-Based Incentive should be examined to off-set reductions in the Utility Rate of Return, while simultaneously providing an incentive to achieve increased energy efficiency whereby the savings are allocated to the Ratepayers and Utilities.

Options 4a, 4b and 4c – Adjustments to Repayment Term and Utility Rate of Return

Three (3) additional options (4a, 4b and 4c) were analyzed which incorporate Principles #1 and #2, above. In all three of these options, the repayment of Unamortized Balance was spread over a 10-year period with complete repayment by 2030. The variable in these options was Utility Rate of Return on energy efficiency investments, which were examined at 8%, 7% and 6%, respectively.

The table below summarizes these options in comparison to the Status Quo, OPC and PSC Staff proposals.

Table IV-B

	CRWG Report Options			Additional Options		
	1	2	3	4a	4b	4c
	Status Quo	OPC	PSC			
Avg. Utility Return per Year	$ 60,106,475	$ 4,774,085	$ 20,036,108	$ 25,286,892	$ 22,125,661	$ 18,943,709
Opportunity to Earn WACC	9.23%	4.00%	9.23%	8.00%	7.00%	6.00%
Avg. Ratepayer Surcharges per Year	$ 401,600,458	$ 436,627,974	$ 451,889,997	$ 457,140,781	$ 453,979,550	$ 450,797,598
Unamortized Balance/Debt in 2030	$ 903,599,067	$ -	$ -	$ -	$ -	$ -
Maximum RatePayer Impact (month)	$ 6.52	$ 8.32	$ 15.17	$ 8.42	$ 8.35	$ 8.27
10-Year Avg Ratepayer Impact (month)	$ 6.26	$ 6.76	$ 6.98	$ 7.06	$ 7.01	$ 6.97
RatePayer Impact in 2030 (month)	$ 6.52	$ 5.57	$ 5.57	$ 5.57	$ 5.57	$ 5.57

A few highlights worth noting:

- Options 4a and 4b deliver greater Utility Revenue over a 10-year period than the PSC Staff option even though the Rate of Return is lower. This is due to the longer term (10 years) for repayment of Unamortized Balance.
- The 10-year average Ratepayer Impact of Options 4a, 4b and 4c are in the same general range as the OPC and PSC Staff options.
- The maximum Ratepayer Impact of Options 4a, 4b and 4c are significantly lower than the PSC Staff scenario and in the same general range as the OPC scenario.

Spreadsheets which summarize Options 4a, 4b and 4c follow.

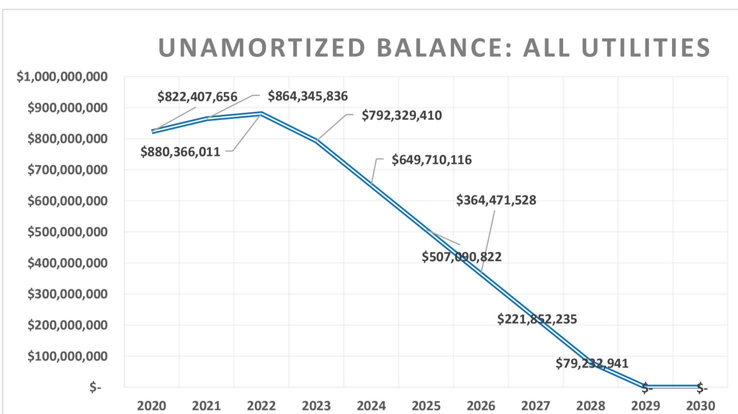
All EmPower Utilities

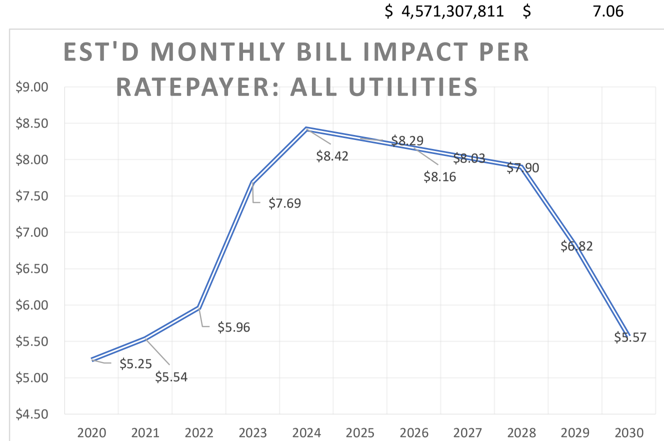
Utility Financial Data - PSC Filings - Case 9494			
PSC Item	PSC Maillog	Utility	Date
171	227417	WG&L	11/18/2019
174	227502	PEPCO	11/15/2019
175	227501	DP&L	11/15/2019
177	227606	SMECO	11/22/2019
179	227637	Potomac Ed	11/25/2019
181	227547	BGE	11/18/2019

Utility	WACC/Rate of Return	Proposed
WG&L	9.62%	8.00%
PEPCO	9.29%	8.00%
DPL	8.57%	8.00%
SMECO	6.12%	8.00%
Potomac Ed	9.09%	8.00%
BGE	9.51%	8.00%

Option 4a: Longer Term Repayment Reduced ROR 8%

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year	Program Cost	Amortization	Unamortized Balance (Prior)+(2)-(3)	Return to Utility (4)*(6)*(.7248)	Imputed Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (12) * (13)	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 301,118,228	$ 244,509,479	$ 822,407,656	$ 55,116,450	9.25%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ (8,670,185)	$ 331,338,401	$ 5.25	$ 62.95
2021	$ 301,118,228	$ 259,180,048	$ 864,345,836	$ 50,136,484	8.00%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ -	$ 349,699,188	$ 5.54	$ 66.44
2022	$ 301,118,228	$ 285,098,053	$ 880,366,011	$ 51,066,106	8.00%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ -	$ 376,546,814	$ 5.96	$ 71.54
2023	$ 301,118,228	$ 389,154,829	$ 792,329,410	$ 45,959,495	8.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 485,624,779	$ 7.69	$ 92.26
2024	$ 301,118,228	$ 443,737,522	$ 649,710,116	$ 37,686,786	8.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 531,934,763	$ 8.42	$ 101.06
2025	$ 301,118,228	$ 443,737,522	$ 507,090,822	$ 29,414,077	8.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 523,662,054	$ 8.29	$ 99.49
2026	$ 301,118,228	$ 443,737,522	$ 364,471,528	$ 21,141,368	8.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 515,389,345	$ 8.16	$ 97.92
2027	$ 301,118,228	$ 443,737,522	$ 221,852,235	$ 12,868,659	8.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 507,116,635	$ 8.03	$ 96.35
2028	$ 301,118,228	$ 443,737,522	$ 79,232,941	$ 4,595,950	8.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 498,843,926	$ 7.90	$ 94.77
2029	$ 301,118,228	$ 380,351,169	$ -	$ -	8.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 430,861,624	$ 6.82	$ 81.86
2030	$ 301,118,228	$ 301,118,228	$ -	$ -	8.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 351,628,683	$ 5.57	$ 66.80
10 Year Total			$ -	$ 252,868,924						$ 4,571,307,811	$ 7.06	





All EmPower Utilities

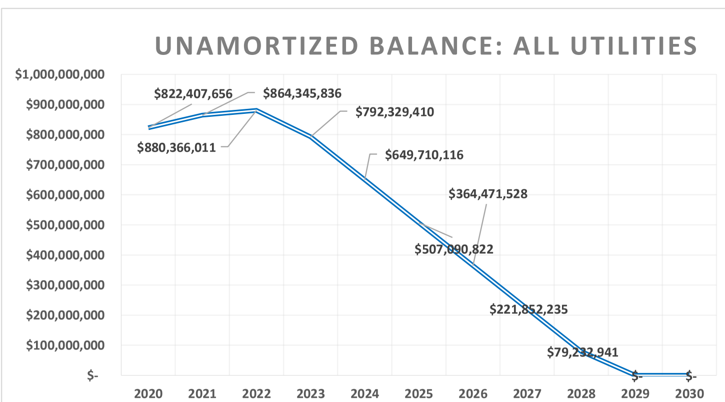
Utility Financial Data - PSC Filings - Case 9494

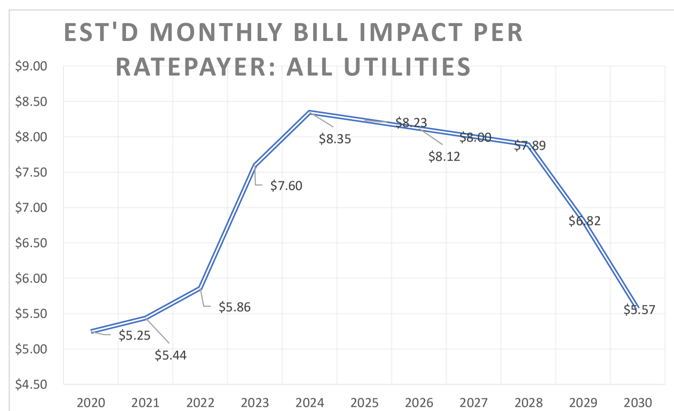
PSC Item	PSC Maillog	Utility	Date
171	227417	WG&L	11/18/2019
174	227502	PEPCO	11/15/2019
175	227501	DP&L	11/15/2019
177	227606	SMECO	11/22/2019
179	227637	Potomac Ed	11/25/2019
181	227547	BGE	11/18/2019

Utility	WACC/Rate of Return	Proposed
WG&L	9.62%	7.00%
PEPCO	9.29%	7.00%
DPL	8.57%	7.00%
SMECO	6.12%	7.00%
Potomac Ed	9.09%	7.00%
BGE	9.51%	7.00%

Option 4b: Longer Term Repayment Reduced ROR 7%

(1) Year	(2) Program Cost	(3) Amortization	(4) Unamortized Balance (Prior)+(2)-(3)	(5) Return to Utility (4)*(6)*(.7248)	(6) Imputed Utility WACC / Rate of Return	(7) Net Operating Costs (Current Year Expense)	(8) Federal Tax Credit	(9) Wholesale Revenue	(10) True Up	(11) Ratepayer Revenue Requirement (12) * (13)	(12) Estimated Monthly Bill Impact per Ratepayer	(13) Estimated Annual Bill Impact per Ratepayer
2020	$ 301,118,228	$ 244,509,479	$ 822,407,656	$ 55,116,450	9.25%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ (8,670,185)	$ 331,338,401	$ 5.25	$ 62.95
2021	$ 301,118,228	$ 259,180,048	$ 864,345,836	$ 43,868,701	7.00%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ -	$ 343,431,405	$ 5.44	$ 65.25
2022	$ 301,118,228	$ 285,098,053	$ 880,366,011	$ 44,682,092	7.00%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ -	$ 370,162,801	$ 5.86	$ 70.33
2023	$ 301,118,228	$ 389,154,829	$ 792,329,410	$ 40,213,883	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 479,879,167	$ 7.60	$ 91.17
2024	$ 301,118,228	$ 443,737,522	$ 649,710,116	$ 32,975,384	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 527,223,361	$ 8.35	$ 100.17
2025	$ 301,118,228	$ 443,737,522	$ 507,090,822	$ 25,736,885	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 519,984,862	$ 8.23	$ 98.79
2026	$ 301,118,228	$ 443,737,522	$ 364,471,528	$ 18,498,386	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 512,746,363	$ 8.12	$ 97.41
2027	$ 301,118,228	$ 443,737,522	$ 221,852,235	$ 11,259,887	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 505,507,864	$ 8.00	$ 96.04
2028	$ 301,118,228	$ 443,737,522	$ 79,232,941	$ 4,021,388	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 498,269,365	$ 7.89	$ 94.66
2029	$ 301,118,228	$ 380,351,169	$ -	$ -	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 430,861,624	$ 6.82	$ 81.86
2030	$ 301,118,228	$ 301,118,228	$ -	$ -	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 351,628,683	$ 5.57	$ 66.80
10 Year Total			$ -	$ 221,256,608						$ 4,539,695,496	$ 7.01	





All EmPower Utilities

Utility Financial Data - PSC Filings - Case 9494			
PSC Item	PSC Maillog	Utility	Date
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174	227502	PEPCO	11/15/2019
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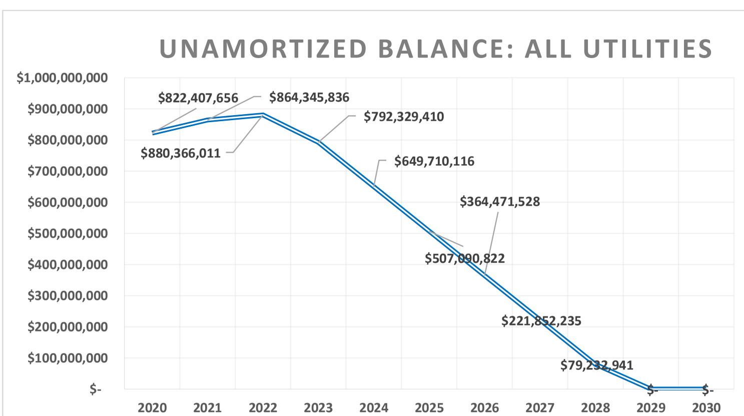
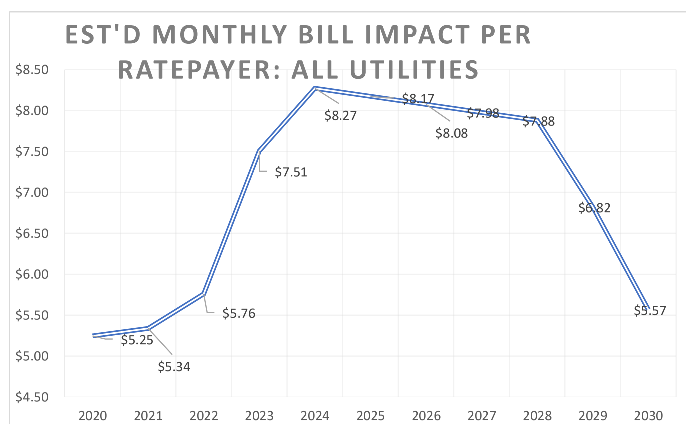
177	227606	SMECO	11/22/2019
179	227637	Potomac Ed	11/25/2019
181	227547	BGE	11/18/2019

Utility	WACC/Rate of Return	Proposed
WG&L	9.62%	6.00%
PEPCO	9.29%	6.00%
DPL	8.57%	6.00%
SMECO	6.12%	6.00%
Potomac Ed	9.09%	6.00%
BGE	9.51%	6.00%

Option 4c: Longer Term Repayment Reduced ROR 6%

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year	Program Cost	Amortization	Unamortized Balance (Prior)+(2)-(3)	Return to Utility (4)*(6)*(.7248)	Imputed Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (12) * (13)	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 301,118,228	$ 244,509,479	$ 822,407,656	$ 55,116,450	9.25%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ (8,670,185)	$ 331,338,401	$ 5.25	$ 62.95
2021	$ 301,118,228	$ 259,180,048	$ 864,345,836	$ 37,560,480	6.00%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ -	$ 337,123,184	$ 5.34	$ 64.05
2022	$ 301,118,228	$ 285,098,053	$ 880,366,011	$ 38,256,072	6.00%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ -	$ 363,736,781	$ 5.76	$ 69.11
2023	$ 301,118,228	$ 389,154,829	$ 792,329,410	$ 34,430,465	6.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 474,095,749	$ 7.51	$ 90.07
2024	$ 301,118,228	$ 443,737,522	$ 649,710,116	$ 28,232,981	6.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 522,480,958	$ 8.27	$ 99.26
2025	$ 301,118,228	$ 443,737,522	$ 507,090,822	$ 22,035,498	6.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 516,283,475	$ 8.17	$ 98.09
2026	$ 301,118,228	$ 443,737,522	$ 364,471,528	$ 15,838,014	6.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 510,085,991	$ 8.08	$ 96.91
2027	$ 301,118,228	$ 443,737,522	$ 221,852,235	$ 9,640,530	6.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 503,888,507	$ 7.98	$ 95.73
2028	$ 301,118,228	$ 443,737,522	$ 79,232,941	$ 3,443,047	6.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 497,691,023	$ 7.88	$ 94.55
2029	$ 301,118,228	$ 380,351,169	$ -	$ -	6.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 430,861,624	$ 6.82	$ 81.86
2030	$ 301,118,228	$ 301,118,228	$ -	$ -	6.00%	$ 70,324,473	$ -	$ (11,229,529)	$ -	$ 351,628,683	$ 5.57	$ 66.80
10 Year Total			$ -	$ 189,437,088						$ 4,507,875,976	$ 6.97	





Option 5a and 5 b – Performance-Based Incentives

Two additional options were examined to incorporate a Performance-Based Incentive mechanism. There is a wide range of best practices to consider in designing a performance-based incentive for a program such as EmPOWER. That said, any option considered must take into account the current program structure and the inherent constraints associated with over $800 million of Unamortized Balance and long-standing practice of delivering a steady Rate of Return to the EmPOWER Utilities.

These options (referred to as Option 5a and Option 5b) build upon the existing programmatic and financial structure of EmPOWER, retaining most of the key elements of the program while adding new incentive structures that have the potential to benefit both the Utility Companies and Ratepayers. Additionally, these options address (over a 10-year period) the full repayment of the over $800 million Unamortized Balance associated with the program through a gradual repayment mechanism by Ratepayers.

Option 5a

This option provides an incentive for the EmPOWER Utilities in the event that program investments result in a reduction of overall energy usage by Ratepayers. Reduced usage (from a pre-determined baseline based on historical usage) by Ratepayers is captured as program Savings and is split 50/50 between the Utilities and Ratepayers.

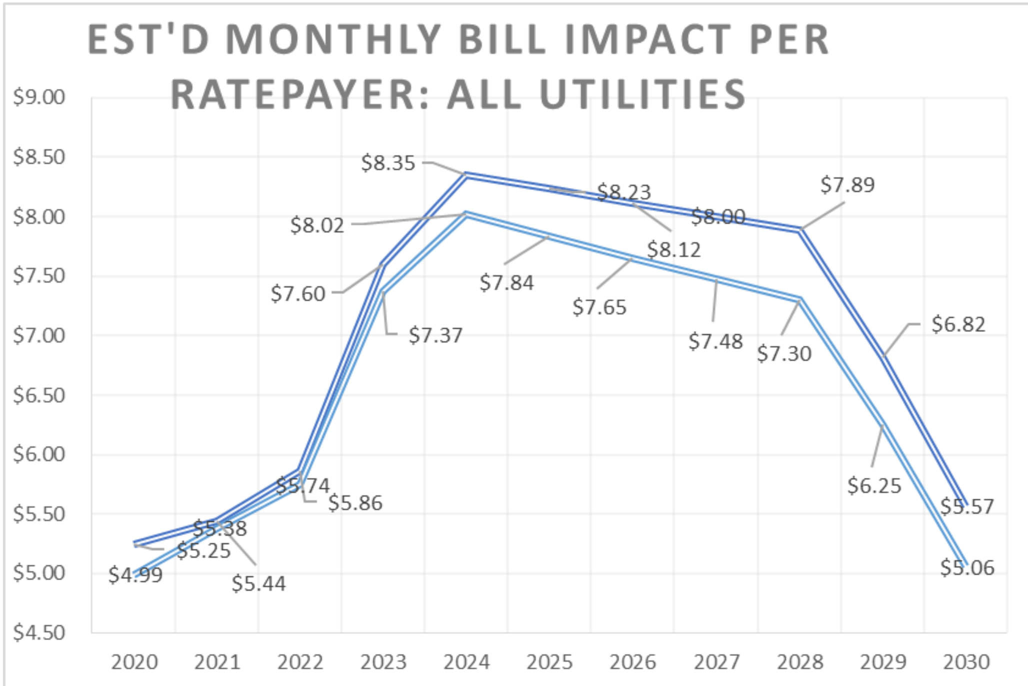
This approach reduces the baseline Rate of Return to the EmPOWER Utilities by approximately 25% (from an average of 9.23% to 7.0%).

To model the Savings, the Ratepayer Revenue Requirement and Ratepayer Surcharges are held constant with amounts from the baseline year. Any reduction in Sales is then captured as Savings which are then distributed to the Ratepayers and EmPOWER Utilities through a True Up process, with 50% of the savings rebated to Ratepayer and the remaining 50% being added to Utility Return.

In this model, there is no upside cap on the Utility ROR.

The graph below represents the impact of the application of the Savings to the monthly bill for Ratepayers over the 10-year period. The lower line reflects the application of modeled Savings.

Graph IV-G



Option 5b

This option also provides an incentive for the EmPOWER Utilities in the event that program investments result in a reduction of overall energy usage by Ratepayers. Reduced usage (from a pre-determined baseline based on historical usage) by Ratepayers is captured as program Savings and is split between the Utilities and Ratepayers based on a series of thresholds.

This option is more nuanced that Option 5a, as it includes both a floor and a ceiling on the Rate of Return to the EmPOWER Utilities. Specifically, it includes the following

- FULL ROR + 50% share of excess revenue for energy savings greater than 110% of the three-year cycle goal. The ROR is capped at 2% above current WACC.
- FULL ROR for energy savings between 90% - 110% of the three-year cycle goal
- ROR is reduced if energy savings are less than 90% of three-year energy savings goal. The ROR is reduced to a floor which is the current WACC minus 1%.

The graph below represents the impact of the application of the Savings to the monthly bill for Ratepayers over the 10-year period. The lower line reflects the application of modeled Savings.

Graph IV-H

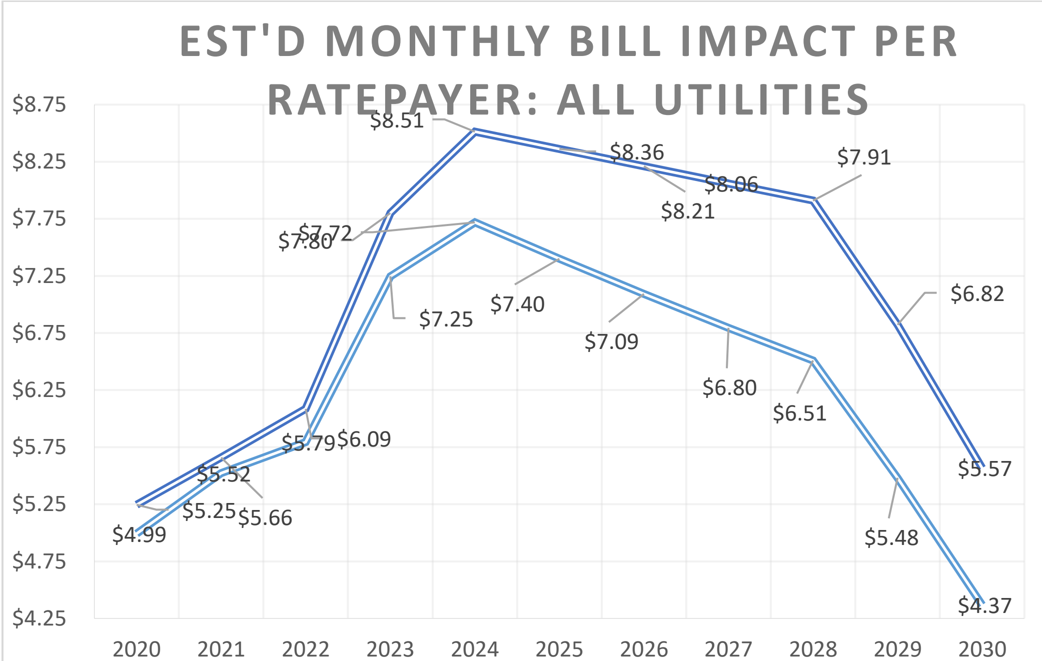


Table IV-C below compares the average monthly costs, maximum monthly charge, and 2030 rates of Option 5a and Option 5b to the Status Quo option:

Table IV-C

	Status Quo	**Option 5A**		**Option 5B**	
		Rates	% Change	Rates	% Change
10 Year Avg. Monthly Rate	$6.26	$6.65	6%	$6.27	0.2%
Maximum Monthly Rate	$6.52	$8.02	23%	$7.72	18%
Forecasted 2030 Rate	$6.52	$5.06	(22%)	$4.37	(33%)

Assumptions

- Based on forecasts prior to the COVID-19 pandemic, customer growth was expected and electricity sales (net of DSM) was expected to be relatively flat.
- The model uses the proposed 2020 program costs for future years
- A higher portion of the Unamortized Balance would be repaid each year

Table IV-D below compares the two (2) Performance-Based Incentive options (Option 5a and Option 5b) to the previously analyzed options.

Table IV-D

	CRWG Report Options			Additional Options			Performance Based	Performance Based
	1	2	3	4a	4b	4c	5a	5b
	Status Quo	OPC	PSC				2% Annual Reduction, 7% Baseline ROR, 50/50 Split	2.7% Annual Reduction, WACC Baseline ROR, Split above 2.2% (110% goal), ROR Cap
Avg. Utility Return per Year	$ 60,106,475	$ 4,774,085	$ 20,036,108	$ 25,286,892	$ 22,125,661	$ 18,943,709	$ 39,381,483	$ 33,788,678
Opportunity to Earn WACC	9.23%	4.00%	9.23%	8.00%	7.00%	6.00%	12.46%	10.69%
Avg. Ratepayer Surcharges per Year	$ 401,600,458	$ 436,627,974	$ 451,889,997	$ 457,140,781	$ 453,979,550	$ 450,797,598	$ 430,164,033	$ 403,785,592
Unamortized Balance/Debt in 2030	$ 903,599,067	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Maximum RatePayer Impact (month)	$ 6.52	$ 8.32	$ 15.17	$ 8.42	$ 8.35	$ 8.27	$ 8.02	$ 7.72
10-Year Avg Ratepayer Impact (month)	$ 6.26	$ 6.76	$ 6.98	$ 7.06	$ 7.01	$ 6.97	$ 6.65	$ 6.27
RatePayer Impact in 2030 (month)	$ 6.52	$ 5.57	$ 5.57	$ 5.57	$ 5.57	$ 5.57	$ 5.06	$ 4.37

A few highlights worth noting:

- Option 5a and Option 5b delivers greater Utility Revenue over a 10-year period than all prior options except for the Status Quo Option.
- The Rate of Return for Option 5a and Option 5b are greater than all other options due to the application of incentivized Savings. In the event that Savings do not materialize, the return to Utilities will be lower.
- Total Ratepayer Surcharges over the 10-year period are lower in Option 5a and Option 5b than all other options except for the Status Quo Option, which does not incorporate any paydown of Unamortized Balance.
- The Monthly Ratepayer Impact in 2030 for Option 5a and Option 5b is lower than all other Options due to application of modeled Savings. At $5.06/month for Option 5a and $4.37/month for Option 5b, it is over 20% lower than the Status Quo Option at $6.52/month.

All EmPower Utilities

Utility Financial Data - PSC Filings - Case 9494			
PSC Item	PSC Maillog	Utility	Date
171	227417	WG&L	11/18/2019
174	227502	PEPCO	11/15/2019
175	227501	DP&L	11/15/2019
177	227606	SMECO	11/22/2019
179	227637	Potomac Ed	11/25/2019
181	227547	BGE	11/18/2019

Utility	WACC/Rate of Return	Proposed
WG&L	9.62%	7.00%
PEPCO	9.29%	7.00%
DPL	8.57%	7.00%
SMECO	6.12%	5.10%
Potomac Ed	9.09%	7.00%
BGE	9.51%	7.00%

Option 5a: Performance-Based Incentive with Longer Term Repayment & Reduced ROR

									Excess Ratepayer Revenues	Hold Constant to Option 4b		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year	Program Cost	Amortization	Unamortized Balance (Prior)+(2)-(3)	Return to Utility (4)*(6)*(.7248)	Imputed Utility Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 301,118,228	$244,509,479	$ 822,407,656	$ 55,116,450	9.25%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ (8,670,185)	$ 331,338,401	$ 5.25	$ 62.95
2021	$ 301,118,228	$259,180,048	$ 864,345,836	$ 43,868,701	7.00%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ (6,868,523)	$ 343,426,154	$ 5.44	$ 65.25
2022	$ 301,118,228	$285,098,053	$ 880,366,011	$ 44,682,092	7.00%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ (14,658,216)	$ 370,156,959	$ 5.86	$ 70.32
2023	$ 301,118,228	$389,154,829	$ 792,329,410	$ 40,213,883	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ (28,220,484)	$ 479,874,909	$ 7.60	$ 91.17
2024	$ 301,118,228	$443,737,522	$ 649,710,116	$ 32,975,384	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ (40,929,188)	$ 527,221,669	$ 8.35	$ 100.16
2025	$ 301,118,228	$443,737,522	$ 507,090,822	$ 25,736,885	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ (49,959,815)	$ 519,985,737	$ 8.23	$ 98.79
2026	$ 301,118,228	$443,737,522	$ 364,471,528	$ 18,498,386	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ (58,534,297)	$ 512,749,804	$ 8.12	$ 97.42
2027	$ 301,118,228	$443,737,522	$ 221,852,235	$ 11,259,887	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ (66,664,372)	$ 505,513,872	$ 8.00	$ 96.04
2028	$ 301,118,228	$443,737,522	$ 79,232,941	$ 4,021,388	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ (74,361,494)	$ 498,277,939	$ 7.89	$ 94.67
2029	$ 301,118,228	$380,351,169	$ -	$ -	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ (71,633,372)	$ 430,871,624	$ 6.82	$ 81.86
2030	$ 301,118,228	$301,118,228	$ -	$ -	7.00%	$ 70,324,473	$ -	$ (11,229,529)	$ (64,324,277)	$ 351,638,683	$ 5.57	$ 66.81
		10-Year Total		$221,256,608					$ (476,154,038)	$ 4,539,717,350	$ 7.01	

Apply Savings to Ratepayers		
Ratepayer Revenue Requirement	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
$ 315,335,060	$ 4.99	$ 59.91
$ 339,991,893	$ 5.38	$ 64.59
$ 362,827,851	$ 5.74	$ 68.93
$ 465,764,667	$ 7.37	$ 88.49
$ 506,757,075	$ 8.02	$ 96.28
$ 495,005,829	$ 7.84	$ 94.04
$ 483,482,656	$ 7.65	$ 91.86
$ 472,181,686	$ 7.48	$ 89.71
$ 461,097,192	$ 7.30	$ 87.60
$ 395,054,938	$ 6.25	$ 75.06
$ 319,476,544	$ 5.06	$ 60.70
$ 4,301,640,331	$ 6.65	

10-Yr Totals	$ 4,359,398,899	$221,256,608
Modeled Rate of Return		7.00%
Add'l Return via Savings		$172,558,223
Adjusted Rate of Return		12.46%

Total Savings @2% reduction/yr	$ 476,154,038
50% of Savings to Ratepayers	$ 238,077,019
50% of Savings to Utilities	$ 238,077,019

All EmPower Utilities

Utility Financial Data - PSC Filings - Case 9494

PSC Item	PSC Maillog	Utility	Date
171	227417	WG&L	11/18/2019
174	227502	PEPCO	11/15/2019
175	227501	DP&L	11/15/2019
177	227606	SMECO	11/22/2019
179	227637	Potomac Ed	11/25/2019
181	227547	BGE	11/18/2019

Performance-Based Incentive Model

Utility	Current WACC/ROR	Baseline WACC/ROR at <90% of Goal (<1.8% reduction)	Baseline WACC/ROR at >=90% of Goal (>=1.8% reduction)	Adjusted ROR After Split of Savings (if applic.)	ROR Cap Triggered?
WG&L	9.62%	8.62%	9.62%	10.63%	No
PEPCO	9.29%	8.29%	9.29%	11.28%	Yes
DPL	8.57%	7.57%	8.57%	10.10%	No
SMECO	6.12%	5.12%	6.12%	7.44%	No
Potomac Ed	9.09%	8.09%	9.09%	10.10%	No
BGE	9.51%	8.51%	9.51%	10.98%	No
Overall	9.25%	9.23%	9.25%	10.69%	

Assumptions		
EmPOWER Goal for Annual Utility Sales Reduction	2.00%	fixed
Scenario Percentage Utility Sales Reduction	2.70%	input
(Note: do not enter zero)		
Savings Split Triggered for Exceeding Goal by:	110%	fixed
Savings Split Triggered by this Scenario?	Yes	formula

Note: ROR capped at 2% above Current WACC/ROR

Note Regarding Amortization of Program Costs
Amortization (Column 3) is increased during 2021-2024 timeframe to new baseline that is approx. 50% above annual Program Costs (Column 2) to achieve accelerated paydown of Unamortized Balance (Column 4)

Option 5b: Performance-Based Incentive with Longer Term Repayment

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10) Excess Ratepayer Revenues	(11) Hold Constant Opt 4 @ WACC	(12)	(13)
Year	Program Cost	Amortization	Unamortized Balance (Prior)+(2)-(3)	Return to Utility (4)*(6)*(.7248)	Imputed Utility Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 301,118,228	$244,509,479	$ 822,407,656	$ 55,116,450	9.25%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ (8,670,185)	$ 331,338,401	$ 5.25	$ 62.95
2021	$ 301,118,228	$259,180,048	$ 864,345,836	$ 57,870,890	9.24%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ (9,650,977)	$ 357,443,594	$ 5.66	$ 67.91
2022	$ 301,118,228	$285,098,053	$ 880,366,011	$ 58,890,302	9.23%	$ 70,324,473	$ (10,127,799)	$ (11,229,529)	$ (20,476,361)	$ 384,381,011	$ 6.09	$ 73.03
2023	$ 301,118,228	$389,154,829	$ 792,329,410	$ 53,001,272	9.23%	$ 70,324,473	$ -	$ (11,229,529)	$ (38,839,015)	$ 492,676,556	$ 7.80	$ 93.60
2024	$ 301,118,228	$443,737,522	$ 649,710,116	$ 43,461,043	9.23%	$ 70,324,473	$ -	$ (11,229,529)	$ (55,763,721)	$ 537,719,020	$ 8.51	$ 102.16
2025	$ 301,118,228	$443,737,522	$ 507,090,822	$ 33,920,814	9.23%	$ 70,324,473	$ -	$ (11,229,529)	$ (67,556,279)	$ 528,178,791	$ 8.36	$ 100.35
2026	$ 301,118,228	$443,737,522	$ 364,471,528	$ 24,380,585	9.23%	$ 70,324,473	$ -	$ (11,229,529)	$ (78,548,212)	$ 518,638,562	$ 8.21	$ 98.53
2027	$ 301,118,228	$443,737,522	$ 221,852,235	$ 14,840,356	9.23%	$ 70,324,473	$ -	$ (11,229,529)	$ (88,767,202)	$ 509,098,333	$ 8.06	$ 96.72
2028	$ 301,118,228	$443,737,522	$ 79,232,941	$ 5,300,127	9.23%	$ 70,324,473	$ -	$ (11,229,529)	$ (98,240,019)	$ 499,558,104	$ 7.91	$ 94.91
2029	$ 301,118,228	$380,351,169	$ -	$ -	9.23%	$ 70,324,473	$ -	$ (11,229,529)	$ (94,078,314)	$ 430,871,624	$ 6.82	$ 81.86
2030	$ 301,118,228	$301,118,228	$ -	$ -	9.23%	$ 70,324,473	$ -	$ (11,229,529)	$ (84,199,493)	$ 351,638,683	$ 5.57	$ 66.81
		10-Year Total		$291,665,390					$ (636,119,593)	$ 4,610,204,278	$ 7.11	

Savings Applied to Ratepayers	89.97%	
Ratepayer Revenue Requirement	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
$ 315,335,060	$ 4.99	$ 59.91
$ 348,760,131	$ 5.52	$ 66.26
$ 365,957,413	$ 5.79	$ 69.53
$ 457,731,168	$ 7.25	$ 86.96
$ 487,545,633	$ 7.72	$ 92.63
$ 467,395,055	$ 7.40	$ 88.80
$ 447,964,839	$ 7.09	$ 85.11
$ 429,230,078	$ 6.80	$ 81.55
$ 411,166,685	$ 6.51	$ 78.12
$ 346,224,697	$ 5.48	$ 65.78
$ 275,880,221	$ 4.37	$ 52.41
$ 4,037,855,921	$ 6.27	
5,484,102.72	check	

10-Yr Totals	$ 4,359,398,899	$291,665,390
Modeled Rate of Return		9.23%
Add'l Return via Svgs (aft.tax)		$ 50,196,270
Adjusted Rate of Return		10.82%

Adjusted 10-Year Total $341,861,660

Total Savings (from above)	$ 636,119,593
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 69,255,339
Savings to Ratepayers	$ 566,864,254
check	-

110% Target	$(497,608,915)

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Application of ROR cap at 2% above Current WACC/ROR by Utility

10-Yr Totals	$ 4,359,398,899	$291,665,390
Modeled Rate of Return		9.23%
Add'l Return via Svgs (aft.tax)		$ 46,221,392
Adjusted Rate of Return		10.69%

Total Savings (from above)	$ 636,119,593
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 63,771,236
Savings to Ratepayers	$ 572,348,357
check	-

Adjusted 10-Year Total $337,886,782

V. ALTERNATIVES RANKING

In this Section, the eight (8) Options presented in Section IV are ranked in accordance with the key metrics described in Section IV. Each of the metrics is assigned a ranking based on their relative position to all other options.

Table V-A below summarizes the rankings of the Options:

Table V-A

	CRWG Report Options			Additional Options			Performance Based	Performance Based
	1	2	3	4a	4b	4c	5a	5b
	Status Quo	OPC	PSC				2% Annual Reduction, 7% Baseline ROR, 50/50 Split	2.7% Annual Reduction, WACC Baseline ROR, Split above 2.2% (110% goal), ROR Cap
Avg. Utility Return per Year	8	1	2	5	4	3	7	6
Opportunity to Earn WACC	3	8	3	5	6	7	1	2
10-Year Ratepayer Surcharges	1	4	6	8	7	5	3	2
Unamortized Balance/Debt in 2030	8	1	1	1	1	1	1	1
Maximum RatePayer Impact (month)	1	4	8	4	4	4	3	2
10-Year Avg Ratepayer Impact (month)	1	4	5	5	5	5	3	2
RatePayer Impact in 2030 (month)	8	3	3	3	3	3	2	1
Total Ranking Points	30	25	28	31	30	28	20	16
Average Ranking	4.29	3.57	4.00	4.43	4.29	4.00	2.86	2.29
Overall Rank	6	3	4	8	6	4	2	1

VI. SUMMARY OF ANALYSIS AND PEROFORMANCE REQUIREMENTS

As demonstrated in the rankings in Section V, the Performance-Based Options build upon the existing programmatic and financial structure of EmPOWER, retaining most of the key elements of the program while adding a new incentive that has the potential to benefit both the Utility Companies and Ratepayers. Additionally, these Options address (over a 10-year period) the full repayment of the over $820 million of uncollected costs associated with the program.

Additional "Sector Level" analysis of the two Performance-Based Options is provided in Appendix 2. This additional analysis provides spreadsheets for each of the EmPOWER Utilities detailing these options on a Residential and Commercial/Industrial basis.

The Performance-Based Options presented herein are quite straightforward, and were selected for the ease of financial modeling alongside the analysis. Much more nuanced incentive models could and should be explored. As noted above in Section II, the experience in Illinois, New Jersey and Massachusetts provide EmPOWER stakeholders with additional performance-based options.

One approach that was considered, but not evaluated herein, was the concept of recommending that the Utility Companies raise capital through debt/bond issuances in the capital markets in order to "refinance" the existing uncollected program costs at lower interest rates.

This approach was determined to be outside the parameters of what could reasonably be achieved through EmPOWER. In addition to the transactional complexity of such an approach, it was also determined that the potential negative reaction to a public offering of debt was high.

That said, it is worth noting that several of the options include a feature whereby the Utility Rate of Return is reduced. Since the Rate of Return includes the borrowing cost of Utilities, a reduction in this rate is similar to refinancing existing uncollected costs at lower interest rates.

PERFORMANCE REQUIREMENTS

BUDGET

The EmPOWER Program planning includes a budgeting process that allocates sufficient funds to achieve the energy savings goal through ratepayer rebates and incentives, cover administrative costs, and provide a return to the EmPOWER Utilities. The planning process provides an opportunity for stakeholders to voice concerns about the budget and merits of the proposed cycle plans to the Commission. The incentive mechanisms are built on the premise of continued involvement of stakeholders and feedback to the Commission about the proposed cycle plans and budgets, among other factors. The participation of stakeholders in the planning process will continue to serve the public by balancing stakeholder interests.

The cost recovery mechanism of EmPOWER recoups program costs through a surcharge on customer bills each month. The cost recovery design sought to limit the bill impact on ratepayers by amortizing the annual program costs over a 5-year period and in return, the utilities are afforded the opportunity to earn their authorized ROR on energy efficiency spending that are financed above the amount collected from the ratepayer surcharge.

Currently absent from the current structure is the explicit incentive for utilities to spend efficiently and therefore, manage the costs of achieving the goals. The unamortized balance is directly proportional to the amount of actual spending that occurs; as 80% or more of annual program costs are uncollected each year. Under the current structure, ratepayers' benefit from lower spending as it decreases the amount of uncollected program costs; while utilities benefit from higher spending as the uncollected amount and returns increase. Although spending has been less than the proposed budgets on average, since 2016, the adoption of an explicit incentive component that promotes efficiency in spending would be warranted in a performance incentive mechanism. The budget component promotes cost reduction in two ways: the cost of achieving the energy efficiency goals and the amount of interest that will accrue on the uncollected program costs. The implementation of an incentive mechanism would require strict adherence to the approved budget. However, reallocation of funds between programs should still be considered but the energy savings should be achieved within the approved budget. It is not expected that material changes to the budgeting process would be required.

REQUIREMENT #1—*Reported Spending < 100% of approved expenditures*[8]

EVALUATION

The evaluation process will remain crucial to a performance incentive mechanism in EmPOWER. Additional evaluation of energy savings and benefits may be required to verify reports by the EmPOWER Utilities as the evaluation process is currently a year or two years behind the current program year, for some programs. Changes may be needed to implement more timely evaluation of programs. The evaluation of the Programs' success is determined by the Total Resource Costs (TRC) test which examines the net present value of the benefits and costs. A "TRC ratios greater than 1.0 indicate that the financial benefits that accrue over the life of the measures exceed the financial costs of the program, specifically the costs associated with: utility program administration; the provision of incentives to free riders; and customer outlays for the efficiency measures."[9] Meeting the TRC threshold of 1.0 for the Residential and for the Commercial and Industrial sub-portfolios should be a requirement—in addition to meeting the energy savings goal—to ensure that the programs provide benefits to ratepayers above the cost. Evaluation of each year's program results should be utilized to monitor the progress of the mechanism towards achieving the stated goals.

REQUIREMENT # 2—*TRC > 1 for Residential and Commercial and Industrial Portfolios*

PROGRAM LEVEL ENERGY SAVINGS

Although the three-year plans proposed by the EmPOWER utilities include an evaluation of each program's cost-effectiveness, the sub-portfolio approach to the TRC was adopted to encourages the development of new programs and supports new innovations that may contribute to State goals and economic development. A disadvantage of a review at the sub-portfolio level is that it allows for some programs to contribute more than their fair share of energy savings; that is, while a few programs produce significant benefits, there are programs that significantly underperform. Evidenced from recent

[8] Adjustments/changes to reported spending in future years should trigger an evaluation by the Commission to see if adjustments are needed to rewards/penalties.

[9] Public Service Commission of Maryland; The EmPOWER Maryland Energy Efficiency Act STANDARD REPORT OF 2020 at 19.

EmPOWER reports show that two or three residential programs can account for over 75**%** of the gross energy savings for some utility portfolios.

A reconciliation of the proposed program benefits and retrospective evaluation would increase accountability and help to improve the planning process. To improve program performance, it should be required that, in addition to meeting the three-year energy savings goals, utilities also meet or exceed the program benefits forecasted in the three-year plans. An incentive mechanism that ensures the proposed benefits of the programs to ratepayers are achieved through a balanced distribution of energy savings will help to spread the benefits across the ratepayers and balance the costs of achieving the energy saving goals. The goal is not to reduce the performance of the programs that have exceeded expectations but to improve the planning process so that the expected benefits of the programs can be achieved. The ability for a utility to achieve the program level benefit-cost ratio in the approved design plan for all programs should be met or exceeded in addition to achieving the three-year cycle energy savings targets.

REQUIREMENT # 3—*Meet or Exceed designed program-level benefit-cost ratios*

REWARD/RISK ADJUSTMENT

Based on the three-year program energy savings goals, an incentive mechanism can promote cost reduction in achieving the energy efficiency goals and increases benefits to ratepayers. However, an adjustment to the risk distribution of achieving the energy savings should be utilized to encourage additional feedback to the Commission and stakeholders on the potential costs and benefits of the program in the planning process. The risk of achieving the EmPOWER energy savings goal falls entirely on the ratepayers despite the administration and design components. Ratepayers pay the interest costs on the uncollected program costs regardless of program performance—absent a finding of imprudent spending—as there are no prescribed penalties for missing the energy savings goal for the three-year cycle. The performance incentive mechanisms, as designed, would change the risk distribution of achieving the program goals by creating incentives for the EmPOWER Utilities to improve the program design and provide stakeholders with a more accurate picture of the expected costs and benefits of achieving the energy efficiency goals.

TRUE-UP PROCESS

The True-up process will continue to play a significant role in the incentive mechanism to balance revenue and costs--including incentive payments. One approach is using targeted energy savings to build the potential costs into the rates and inclusive of a reserve amount each year to make potential incentive payments; alternatively, the amount can be applied to unamortized balance--if the goals are not achieved. In developing the surcharge, a reserve amount may be set to approximately one third of the expected incentive amount for each year based on the energy savings target to reduce the likelihood of a revenue shortfall and limit rate shocks in future years. The amount would be excluded from the True-up process and may be kept in an interest-bearing account. After completion of the evaluation for the cycle performance, a payment would be made to the utilities for meeting the energy savings goals and the performance requirements. The excess revenue could be applied to the uncollected program costs to lower the unamortized balance, if the energy savings goals and performance requirements are not met. In the event, the utility does not meet the energy savings goals and performance requirements, the ROR adjustment would be applied (retroactively for the WACC-1% option) and used to reduce the unamortized balance following the completion of evaluation for the third year of the cycle.

VII. DISCUSSION

The performance incentive mechanisms seek to reduce costs to ratepayers by promoting efficiency in spending, ensuring the delivery of program benefits at the sub-portfolio level, and reconciling the projected program benefits with the realized program benefits. The mechanisms also seek to incentivize a more balanced distribution of the costs and burden of achieving the energy savings goals. Although successful implementation across all the EmPOWER Utilities would help to alleviate the size of the uncollected program costs; there are differences that should be accounted for in the implementation. Differences in organizational structure of the utilities, energy efficiency goals across electricity and natural gas sectors, and programs supported by the EmPOWER surcharges vs non-EmPOWER funds.

Firstly, SMECO is the only cooperative in Maryland participating in EmPOWER and the organizational structure does not necessarily lend itself to the same incentives as an investor-owned-utility; as they do not have the same shareholder responsibility. However, as of the end of 2019, SMECO had $52,510,693 in unamortized program costs. The goal of the performance incentive mechanisms is to reduce long-run costs to ratepayers. To the extent that members of the Cooperative can benefit from a mechanism that seeks to reduce the carrying costs of the uncollected program expenses, certain components of the mechanism may provide value. It is also worth noting that the Cost Recovery Workgroup review revealed that SMECO's WACC is lower than the value shown in the 2020 EmPOWER tariff filing.

Secondly, the current energy efficiency goals do not include an energy saving requirements for natural gas companies. In addition, Washington Gas Light Company started offering energy efficiency programs several years after the Energy Efficiency Act of 2008. The programs offered by Washington Gas Light Company have accumulated $32,443,352 in unamortized program costs but have not yet achieved the forecasted annual energy saving targets. A performance incentive may not be appropriate without natural gas energy efficiency goal; however, ratepayers could benefit from efforts to balance of risk of achieving the energy savings as outlined in the incentive mechanism.

Finally, several of the electric utilities currently support programs that are not funded by ratepayer surcharge but contribute to the energy savings goals; namely, programs funded by Customer Investment Funds (CIF) and the Conservation Voltage Reduction (CVR) program. The current treatment of CIF funds removes the amount from the uncollected balance eliminating the accrual of interest to the utilities. Capital costs related to CVR are currently added to the rate base and receive the authorized rate of return applied to other capital investments. The energy savings associated with both of these programs are captured in the gross energy savings reported by the utilities. MEA recommends that energy savings derived from programs not funded by the EmPOWER surcharge be removed from the performance incentive calculus.

As mentioned earlier, the cost of evaluating of energy savings may increase due to additional review and processes that may be necessary. It is expected that stakeholder involvement will increase due to increased stakes in the evaluation of energy savings. The current policies and procedures may not be sufficient to address the new and potentially growing concerns of the stakeholders. Therefore, new processes may need to be developed to increase transparency and to address these concerns.

IMPACT OF COVID-19

The COVID-19 pandemic has impacted the livelihood of residents and the operations of business in the state of Maryland and across the globe. The forecast of energy consumption and customer growth are two key assumptions in the model that will require adjustments once we have a clearer picture of the magnitude of the pandemic on these variables. The models in the analysis assume that consumption would be relatively flat after adjustments for customer growth at the aggregate level. The implication of the assumption is that the actual revenue collected by the utilities would be sufficient to cover the revenue requirement. Preliminary economic indicators suggest that these assumptions may not hold. The extreme and unforeseen circumstances may also place cost recovery at risk for the utilities and regulatory action may be required to balance the interest of all stakeholders in the market.

Although the main goal of the mechanism is to reduce costs to ratepayers in the long-run, we acknowledge that the mechanisms will increase costs in the short-run and that the timing of those increases may coincide with attempts by individual consumers, businesses, and the State to recover from the pandemic. Increasing costs during the recovery, especially the early stages of recovery, may have unintended consequences on the livelihoods of Maryland residents. These factors could increase uncertainty around rates and the impact on customers. MEA recommends that the Commission weighs all these factors when making a decision about adopting performance incentive mechanisms in EmPOWER.

APPENDIX 1

2020 BASELINE EmPOWER UTILITIES SUMMARY

All EmPower Utilities

Utility Financial Data - PSC Filings - Case 9494

PSC Item	PSC Maillog	Utility	Date
171	227417	WG&L	11/18/2019
174	227502	PEPCO	11/15/2019
175	227501	DP&L	11/15/2019
177	227606	SMECO	11/22/2019
179	227637	Potomac Ed	11/25/2019
181	227547	BGE	11/18/2019

Utility	WACC/Rate of Return
WG&L	9.62%
PEPCO	9.29%
DPL	8.57%
SMECO	6.12%
Potomac Ed	9.09%
BGE	9.51%

2020 Baseline

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year	Program Cost	Amortization	Unamortized Balance (Prior)+(2)-(3)	Return to Utility (4)*(6)*(.7248)	Imputed Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 301,118,228	$ 244,509,479	$ 822,407,656	$ 55,116,450	9.25%	$ 69,284,366	$ (10,127,799)	$ (11,219,529)	$ (8,670,185)	$ 330,308,294	$ 5.23	$ 62.75

Utility **Baltimore Gas and Electric**

Data Source

PSC Case	9494
PSC Item	181
PSC Maillog	227547
Date	11/18/2019

Notes

Tax Rate - State and Federal 27.52%

Net Operating Costs only from Peak Rewards Riders 15 and 56

Amortization of Program Costs

		Amortization By Year				
	Cost by Year	2020	2021	2022	2023	2024
	2016	$ 19,717,838				
	2017	$ 19,027,543	$ 19,027,543			
	2018	$ 19,623,298	$ 19,623,298	$ 19,623,298		
Program Cost	2019	$ 21,467,247	$ 21,467,247	$ 21,467,247	$ 21,467,247	
$ 107,630,501	**2020**	**$ 21,526,100**	**$ 21,526,100**	**$ 21,526,100**	**$ 21,526,100**	**$ 21,526,100**
	2021		$ 21,526,100	$ 21,526,100	$ 21,526,100	$ 21,526,100
	2022			$ 21,526,100	$ 21,526,100	$ 21,526,100
	2023				$ 21,526,100	$ 21,526,100
	2024					$ 21,526,100
	Amort Total	**$ 101,362,026**	**$ 103,170,288**	**$ 105,668,846**	**$ 107,571,648**	**$ 107,630,501**

2020 Baseline

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Year	**Program Cost**	**Amortization**	**Unamortized Balance (Prior)+(2)-(3)**	**Return to Utility (4)*(6)*(.7248)**	**Utility WACC / Rate of Return**	**Net Operating Costs (Current Year Expense)**	**Federal Tax Credit**	**Wholesale Revenue**	**True Up**	**Ratepayer Revenue Requirement (12) * (13)**	**Projected Sales (kWh)**	**Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (12)**	**Average kWh/Month per Ratepayer**	**Estimated Monthly Bill Impact per Ratepayer**	**Estimated Annual Bill Impact per Ratepayer**
2020	$ 107,630,501	$ 101,362,026	$ 329,929,427	$ 22,741,534	9.51%	$ 41,293,987	$ -	$ (2,082,066)	$ (2,026,118)	$ 161,289,363	28,644,557,000	0.00563072	1000	$ 5.63	$ 67.57

Utility **Delmarva Power and Light**

Data Source
PSC Case 9494

PSC Item 175
PSC Maillog 227501
Date 11/15/2019

Notes
Tax Rate - State and Federal 27.52%
Netted out CIF merger contributions for 2018-2020 for projection purposes
Federal Tax Credit ends in 2022
Net Operating Costs only from Demand Response Pricing and Direct Load Control

Amortization of Program Costs

Program Cost	Cost by Year	2020	2021	2022	2023	2024
	2016					
	2017					
	2018					
	2019		INFORMATION NOT AVAILABLE IN FILING			
$ -	**2020**					
	2021					
	2022					
	2023					
	2024					$ -
	Amort Total	$ -	$ -	$ -	$ -	$ -

2020 Baseline

(1) Year	(2) Program Cost	(3) Amortization	(4) Unamortized Balance (Prior)+(2)-(3)	(5) Return to Utility (4)*(6)*(.7248)	(6) Utility WACC / Rate of Return	(7) Net Operating Costs (Current Year Expense)	(8) Federal Tax Credit	(9) Wholesale Revenue	(10) True Up	(11) Ratepayer Revenue Requirement (12) * (13)	(12) Projected Sales (kWh)	(13) Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (12)	(14) Average kWh/Month per Ratepayer	(15) Estimated Monthly Bill Impact per Ratepayer	(16) Estimated Annual Bill Impact per Ratepayer
2020	$ 27,487,526	$ 20,173,758	$ 57,827,006	$ 3,591,057	8.57%	$ 3,079,913	$ (2,312,399)	$ (3,095,726)	$ (735,655)	$ 20,700,948	4,082,777,226	0.00507031	1000	$ 5.07	$ 60.84

Utility **PEPCO**

<u>Data Source</u>

PSC Case	9494
PSC Item	174
PSC Maillog	227502
Date	11/15/2019

<u>Notes</u>

Tax Rate - State and Federal 27.52%

Residential program costs reduced by WGL Billing Coord. amt. ($1,682,363)

Net Operating Costs only from Dynamic Pricing and Direct Load Control

Amortization of Program Costs

Program Cost	Cost by Year	2020	2021	2022	2023	2024
		Amortization By Year				
	2016					
	2017					
	2018					
	2019		INFORMATION NOT AVAILABLE IN FILING			
$ -	**2020**					
	2021					
	2022					
	2023					
	2024					$ -
	Amort Total	$ -	$ -	$ -	$ -	$ -

2020 Baseline

(1) Year	(2) Program Cost	(3) Amortization	(4) Unamortized Balance (Prior)+(2)-(3)	(5) Return to Utility (4)*(6)*(.7248)	(6) Utility WACC / Rate of Return	(7) Net Operating Costs (Current Year Expense)	(8) Federal Tax Credit	(9) Wholesale Revenue	(10) True Up	(11) Ratepayer Revenue Requirement (12) * (13)	(12) Projected Sales (kWh)	(13) Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (11)	(14) Average kWh/Month per Ratepayer	(15) Estimated Monthly Bill Impact per Ratepayer	(16) Estimated Annual Bill Impact per Ratepayer
2020	$ 79,106,442	$ 67,987,733	$ 191,575,983	$ 12,892,619	9.29%	$ 16,325,977	$ (7,815,400)	$ (6,041,737)	$ (5,840,132)	$ 77,509,060	14,053,652,336	0.00551523	1000	$ 5.52	$ 66.18

Utility **Potomac Edison**

Data Source

PSC Case	9494
PSC Item	179
PSC Maillog	227637
Date	11/25/2019

Notes

Tax Rate - State and Federal	27.52%
PEPCO amortizes over 6 years per filings, not 5 years	
No Demand Response Pricing program data in Filing	

Amortization of Program Costs

	Cost by Year	2020	2021	2022	2023	2024	2025
		Amortization By Year					
	2015	$ 4,050,121					
	2016	$ 5,486,778	$ 5,047,543				
	2017	$ 4,138,550	$ 3,831,620	$ 3,524,684			
	2018	$ 6,580,270	$ 6,125,789	$ 5,671,302	$ 5,216,828		
Program Cost	2019	$ 8,866,557	$ 8,294,180	$ 7,721,795	$ 7,149,402	$ 6,577,030	
$ 51,007,667	**2020**	**$ 1,823,032**	**$ 11,294,958**	**$ 10,565,732**	**$ 9,836,524**	**$ 9,107,311**	**$ 8,378,090**
	2021		$ 1,823,032	$ 11,294,958	$ 10,565,732	$ 9,836,524	$ 9,107,311
	2022			$ 1,823,032	$ 11,294,958	$ 10,565,732	$ 9,836,524
	2023				$ 1,823,032	$ 11,294,958	$ 10,565,732
	2024					$ 1,823,032	$ 11,294,958
	2025						$ 1,823,032
	Amort Total	**$ 30,945,308**	**$ 36,417,122**	**$ 40,601,503**	**$ 45,886,476**	**$ 49,204,587**	**$ 51,005,647**

2020 Baseline

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Year	**Program Cost**	**Amortization**	**Unamortized Balance (Prior)+(2)-(3)**	**Return to Utility (4)*(6)*(.7248)**	**Utility WACC / Rate of Return**	**Net Operating Costs (Current Year Expense)**	**Federal Tax Credit**	**Wholesale Revenue**	**True Up**	**Ratepayer Revenue Requirement (12) * (13)**	**Projected Sales (kWh)**	**Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (11)**	**Average kWh/Month per Ratepayer**	**Estimated Monthly Bill Impact per Ratepayer**	**Estimated Annual Bill Impact per Ratepayer**
2020	$ 51,005,647	$ 30,945,308	$ 157,131,195	$ 10,354,946	9.09%	$ -	$ -	$ -	$ -	$ 41,300,254	6,934,708,543	0.00595559	1000	$ 5.96	$ 71.47

Utility **SMECO**

Data Source	
PSC Case	9494
PSC Item	177
PSC Maillog	227606
Date	11/22/2019

Notes

Tax Rate - State and Federal	0.00%

Unamortized Balance not available in filings; extrapolated from 4/19 CRWG report

Net Operating Costs only from Cool Sentry Demand Response programs

Amortization of Program Costs

		Amortization By Year 2020	2021	2022	2023	2024
	Cost by Year					
	2016	$ 2,909,652				
	2017	$ 3,352,086	$ 3,352,086			
	2018	$ 3,605,033	$ 3,605,033	$ 3,605,033		
Program Cost	2019	$ 3,668,451	$ 3,668,451	$ 3,668,451	$ 3,668,451	
$ 14,675,823	**2020**	**$ 5,501,251**	**$ 4,733,925**	**$ 4,733,925**	**$ 4,733,925**	**$ 4,733,925**
	2021		$ 5,501,251	$ 4,733,925	$ 4,733,925	$ 4,733,925
	2022			$ 5,501,251	$ 4,733,925	$ 4,733,925
	2023				$ 5,501,251	$ 4,733,925
	2024					$ 5,501,251
	2025					
	Amort Total	$ 19,036,473	$ 20,860,746	$ 22,242,586	$ 23,371,478	$ 24,436,952

2020 Baseline

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Year	**Program Cost**	**Amortization**	**Unamortized Balance (Prior)+(2)-(3)**	**Return to Utility (4)*(6)**	**Utility WACC / Rate of Return**	**Net Operating Costs (Current Year Expense)**	**Federal Tax Credit**	**Wholesale Revenue**	**True Up**	**Ratepayer Revenue Requirement (12) * (13)**	**Projected Sales (kWh)**	**Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (11)**	**Average kWh/Month per Ratepayer**	**Estimated Monthly Bill Impact per Ratepayer**	**Estimated Annual Bill Impact per Ratepayer**
2020	$ 24,436,952	$ 19,036,473	$ 53,510,693	$ 3,274,854	6.12%	$ 8,584,489	$ -	$ -	$ (68,280)	$ 22,243,047	3,531,395,870	0.00629866	1000	$ 6.30	$ 75.58

Utility **Washington Gas & Light**

Data Source

PSC Case	9494
PSC Item	171
PSC Maillog	227417
Date	11/18/2019

Notes

Tax Rate - State and Federal 27.52%

No Demand Response program data in Filing

Monthly therm estimate based on total Res and C&I accounts (492,943)

Amortization of Program Costs

	Cost by Year	Amortization By Year 2020	2021	2022	2023	2024
	2016	$ 323,831				
	2017	$ 453,483	$ 453,483			
	2018	$ 186,309	$ 186,309	$ 186,309		
Program Cost	2019	$ 1,750,326	$ 1,750,326	$ 1,750,326	$ 1,750,326	
$ 11,451,160	**2020**	**$ 2,290,232**	**$ 2,290,232**	**$ 2,290,232**	**$ 2,290,232**	**$ 2,290,232**
	2021		$ 2,290,232	$ 2,290,232	$ 2,290,232	$ 2,290,232
	2022			$ 2,290,232	$ 2,290,232	$ 2,290,232
	2023				$ 2,290,232	$ 2,290,232
	2024					$ 2,290,232
	Amort Total	**$ 5,004,181**	**$ 6,970,582**	**$ 8,807,331**	**$ 10,911,254**	**$ 11,451,160**

2020 Baseline

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Year	**Program Cost**	**Amortization**	**Unamortized Balance (Prior)+(2)-(3)**	**Return to Utility (4)*(6)*(.7248)**	**Utility WACC / Rate of Return**	**Net Operating Costs (Current Year Expense)**	**Federal Tax Credit**	**Wholesale Revenue**	**True Up**	**Ratepayer Revenue Requirement (12) * (13)**	**Projected Sales (Therms)**	**Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (11)**	**Average Therms/Month per Ratepayer**	**Estimated Monthly Bill Impact per Ratepayer**	**Estimated Annual Bill Impact per Ratepayer**
2020	$ 11,451,160	$ 5,004,181	$ 32,433,352	$ 2,261,440	9.62%	$ -	$ -	$ -	$ -	$ 7,265,621	711,417,000	0.01021289	120	$ 1.23	$ 14.74

APPENDIX 2

SECTOR LEVEL ANALYSIS OF PERFORMANCE-BASED OPTIONS

<u>Performance-Based Option 5a</u>

Residential Sector Analysis

All EmPower Utilities - Res Only

Utility Financial Data - PSC Filings - Case 9494

PSC Item	PSC Maillog	Utility	Date
171	227417	WG&L	11/18/2019
174	227502	PEPCO	11/15/2019
175	227501	DP&L	11/15/2019
177	227606	SMECO	11/22/2019
179	227637	Potomac Ed	11/25/2019
181	227547	BGE	11/18/2019

Utility	WACC/Rate of Return	Proposed
WG&L	9.62%	7.00%
PEPCO	9.29%	7.00%
DPL	8.57%	7.00%
SMECO	6.12%	5.10%
Potomac Ed	9.09%	7.00%
BGE	9.51%	7.00%

Option 5a: Performance-Based Incentive with Longer Term Repayment & Reduced ROR

									Excess Ratepayer Revenues	Hold Constant to Option 4b		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year	Program Cost	Amortization	Unamortized Balance (Prior)+(2)-(3)	Return to Utility (4)*(6)*(.7248)	Imputed Utility Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 136,910,545	$124,699,894	$ 480,856,323	$ 32,227,731	9.25%	$ 64,112,188	$ (4,870,265)	$ (9,637,035)	$ (2,633,700)	$ 197,833,479	$ 6.92	$ 83.05
2021	$ 136,910,545	$132,181,888	$ 485,584,980	$ 24,646,157	7.00%	$ 64,112,188	$ (4,870,265)	$ (9,637,035)	$ (4,011,347)	$ 200,567,347	$ 7.02	$ 84.20
2022	$ 136,910,545	$145,400,076	$ 477,095,449	$ 24,215,255	7.00%	$ 64,112,188	$ (4,870,265)	$ (9,637,035)	$ (8,448,844)	$ 213,354,634	$ 7.46	$ 89.57
2023	$ 136,910,545	$184,620,090	$ 429,385,904	$ 21,793,729	7.00%	$ 64,112,188	$ -	$ (9,637,035)	$ (14,997,415)	$ 255,023,387	$ 8.92	$ 107.06
2024	$ 136,910,545	$214,200,008	$ 352,096,441	$ 17,870,858	7.00%	$ 64,112,188	$ -	$ (9,637,035)	$ (21,789,739)	$ 280,680,434	$ 9.82	$ 117.83
2025	$ 136,910,545	$214,200,008	$ 274,806,979	$ 13,947,987	7.00%	$ 64,112,188	$ -	$ (9,637,035)	$ (26,590,646)	$ 276,757,562	$ 9.68	$ 116.18
2026	$ 136,910,545	$214,200,008	$ 197,517,516	$ 10,025,115	7.00%	$ 64,112,188	$ -	$ (9,637,035)	$ (31,146,159)	$ 272,834,691	$ 9.54	$ 114.53
2027	$ 136,910,545	$214,200,008	$ 120,228,053	$ 6,102,244	7.00%	$ 64,112,188	$ -	$ (9,637,035)	$ (35,462,603)	$ 268,911,820	$ 9.41	$ 112.89
2028	$ 136,910,545	$214,200,008	$ 42,938,590	$ 2,179,373	7.00%	$ 64,112,188	$ -	$ (9,637,035)	$ (39,546,150)	$ 264,988,949	$ 9.27	$ 111.24
2029	$ 136,910,545	$179,849,135	$ -	$ -	7.00%	$ 64,112,188	$ -	$ (9,637,035)	$ (37,981,771)	$ 228,458,703	$ 7.99	$ 95.91
2030	$ 136,910,545	$136,910,545	$ -	$ -	7.00%	$ 64,112,188	$ -	$ (9,637,035)	$ (33,936,674)	$ 185,520,113	$ 6.49	$ 77.88
		10-Year Total		$120,780,717					$ (253,911,346)	$ 2,447,097,640	$ 8.41	

Apply Savings to Ratepayers

Year	Ratepayer Revenue Requirement	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 197,833,479	$ 6.92	$ 83.05
2021	$ 198,561,674	$ 6.95	$ 83.36
2022	$ 209,130,212	$ 7.32	$ 87.79
2023	$ 247,524,679	$ 8.66	$ 103.91
2024	$ 269,785,564	$ 9.44	$ 113.25
2025	$ 263,462,239	$ 9.22	$ 110.60
2026	$ 257,261,612	$ 9.00	$ 108.00
2027	$ 251,180,518	$ 8.79	$ 105.44
2028	$ 245,215,874	$ 8.58	$ 102.94
2029	$ 209,467,818	$ 7.33	$ 87.93
2030	$ 168,551,776	$ 5.90	$ 70.76
	$ 2,320,141,967	$ 8.01	

10-Yr Totals	$ 2,379,653,913	$120,780,717
Modeled Rate of Return		7.00%
Add'l Return via Savings		$ 92,017,472
Adjusted Rate of Return		12.34%

Total Savings @2% reduction/yr	$ 253,911,346
50% of Savings to Ratepayers	$ 126,955,673
50% of Savings to Utilities	$ 126,955,673

Utility **Baltimore Gas and Electric**

Data Source

PSC Case	9494
PSC Item	181
PSC Maillog	227547
Date	11/18/2019

Notes

Tax Rate - State and Federal 27.52%
Pay off Unamortized Debt in 10 Years
Net Operating Costs only from Peak Rewards Riders 15 and 56
Wholesale Revenues assumed to remain consistent
Decrease Rate of Return/WACC to 7%
Performance Incentive Incorporated

Amortization of Program Costs

[redacted]

Scenario 5: Performance Incentive with Longer Term Repayment Reduced ROR

								Excess Ratepayer Revenues	Hold Constant to Scenario 4b	Annual Savings 2.0%	Hold Constant to Scenario 4b			
Inputs														
Residential	$ 52,472,238	$ 48,424,233	$ 121,928,151				$ (1,642,675)	$ 651,689		12,245,506,000				
Commercial														
Adjustment														
Peak Rew 15			$ 79,027,783			$ 36,791,698				incl. above				
Peak Rew 56						$ 2,151,270				incl. above				

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (11) * (12)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9) / (11)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 52,472,238	$ 48,424,233	$ 200,955,934	$ 13,851,587	9.51%	38,942,968	$ (1,642,675)	$ 651,689	$ 100,227,802	12,245,506,000	0.00818486	1000	$ 8.18	$ 98.22
2021	$ 52,472,238	$ 51,329,687	$ 202,098,485	$ 10,253,669	7.00%	38,942,968	$ (1,642,675)	$ (1,981,668)	$ 99,083,398	12,000,595,880	0.00809141	1000	$ 8.09	$ 97.10
2022	$ 52,472,238	$ 56,462,656	$ 198,108,067	$ 10,051,211	7.00%	38,942,968	$ (1,642,675)	$ (4,118,951)	$ 104,013,909	11,760,583,962	0.00849405	1000	$ 8.49	$ 101.93
2023	$ 52,472,238	$ 72,283,045	$ 178,297,261	$ 9,046,090	7.00%	38,942,968	$ (1,642,675)	$ (6,988,106)	$ 118,829,177	11,525,372,283	0.00970390	1000	$ 9.70	$ 116.45
2024	$ 52,472,238	$ 84,565,745	$ 146,203,754	$ 7,417,794	7.00%	38,942,968	$ (1,642,675)	$ (10,052,049)	$ 129,483,581	11,294,864,837	0.01057397	1000	$ 10.57	$ 126.89
2025	$ 52,472,238	$ 84,565,745	$ 114,110,247	$ 5,789,497	7.00%	38,942,968	$ (1,642,675)	$ (12,284,234)	$ 127,855,284	11,068,967,541	0.01044100	1000	$ 10.44	$ 125.29
2026	$ 52,472,238	$ 84,565,745	$ 82,016,740	$ 4,161,201	7.00%	38,942,968	$ (1,642,675)	$ (14,409,772)	$ 126,226,988	10,847,588,190	0.01030803	1000	$ 10.31	$ 123.70
2027	$ 52,472,238	$ 84,565,745	$ 49,923,233	$ 2,532,905	7.00%	38,942,968	$ (1,642,675)	$ (16,431,386)	$ 124,598,692	10,630,636,426	0.01017505	1000	$ 10.18	$ 122.10
2028	$ 52,472,238	$ 84,565,745	$ 17,829,726	$ 904,609	7.00%	38,942,968	$ (1,642,675)	$ (18,351,730)	$ 122,970,396	10,418,023,698	0.01004208	1000	$ 10.04	$ 120.51
2029	$ 52,472,238	$ 70,301,964	$ -	$ -	7.00%	38,942,968	$ (1,642,675)	$ (17,922,325)	$ 107,802,006	10,209,663,224	0.00880339	1000	$ 8.80	$ 105.64
2030	$ 52,472,238	$ 52,472,238	$ -	$ -	7.00%	38,942,968	$ (1,642,675)	$ (16,458,377)	$ 89,972,280	10,005,469,959	0.00734737	1000	$ 7.35	$ 88.17
		10-Year Total		$ 50,156,976				$ (118,998,598)						

10-Yr Totals	$ 988,587,512	$ 50,156,976
Modeled Rate of Return		7.00%
Add'l Return via Savings		$ 43,125,092
Adjusted Rate of Return		13.02%

Total Savings @2% reduction/yr	$ 118,998,598
50% of Savings to Ratepayers	$ 59,499,299
50% of Savings to Utilities	$ 59,499,299

Adjusted 10-Year Total $ 93,282,068

Utility **Delmarva Power and Light**

Data Source

PSC Case	9494
PSC Item	175
PSC Maillog	227501
Date	11/15/2019

Notes

Tax Rate - State and Federal 27.52%
Netted out CIF merger contributions for 2018-2020 for projection purposes
Federal Tax Credit ends in 2022
Pay off Unamortized Debt in 10 Years and Continue Program
Net Operating Costs only from Dynamic Pricing and Direct Load Control
Wholesale Revenues assumed to remain consistent
Decrease Rate of Return/WACC to 7%
Performance Incentive Incorporated

Amortization of Program Costs

[redacted]

Scenario 5: Performance Incentive with Longer Term Repayment Reduced ROR

									Excess Ratepayer	Hold Constant	Annual Savings	Hold Constant			
Inputs															
Residential	$ 7,808,179	$ 9,836,197	$ 26,497,654				$ (899,335)	$ (322,763)	$ 186,971		2153135435				
C&I															
DP - Resid						$ 1,200,000		$ (931,241)	$ (448,351)		incl. above				
DL - Resid	$ 1,355,985	$ 1,490,433	$ 7,237,585			$ 2,484,529	$ (293,713)	$ (1,501,728)	$ (300,663)		incl. above				
DL - C&I															
									Revenues	to Scenario 4b	2.0%	to Scenario 4b			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (12) * (13)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (12)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 9,164,164	$ 11,326,630	$ 33,735,239	$ 2,094,958	8.57%	$ 3,684,529	$ (1,193,048)	$ (2,755,732)	$ (562,043)	$ 12,595,294	2,153,135,435	0.00584975	1000	$ 5.85	$ 70.20
2021	$ 9,164,164	$ 12,006,228	$ 30,893,175	$ 1,567,396	7.00%	$ 3,684,529	$ (1,193,048)	$ (2,755,732)	$ (266,187)	$ 13,309,373	2,110,072,726	0.00618139	1000	$ 6.18	$ 74.18
2022	$ 9,164,164	$ 13,206,851	$ 26,850,489	$ 1,362,286	7.00%	$ 3,684,529	$ (1,193,048)	$ (2,755,732)	$ (566,473)	$ 14,304,886	2,067,871,272	0.00664375	1000	$ 6.64	$ 79.72
2023	$ 9,164,164	$ 11,849,213	$ 24,165,440	$ 1,226,058	7.00%	$ 3,684,529		$ (2,755,732)	$ (823,551)	$ 14,004,068	2,026,513,846	0.00650403	1000	$ 6.50	$ 78.05
2024	$ 9,164,164	$ 13,513,943	$ 19,815,661	$ 1,005,367	7.00%	$ 3,684,529		$ (2,755,732)	$ (1,199,265)	$ 15,448,108	1,985,983,569	0.00717470	1000	$ 7.17	$ 86.10
2025	$ 9,164,164	$ 13,513,943	$ 15,465,881	$ 784,677	7.00%	$ 3,684,529		$ (2,755,732)	$ (1,463,038)	$ 15,227,417	1,946,263,898	0.00707221	1000	$ 7.07	$ 84.87
2026	$ 9,164,164	$ 13,513,943	$ 11,116,102	$ 563,987	7.00%	$ 3,684,529		$ (2,755,732)	$ (1,713,132)	$ 15,006,727	1,907,338,620	0.00696971	1000	$ 6.97	$ 83.64
2027	$ 9,164,164	$ 13,513,943	$ 6,766,323	$ 343,296	7.00%	$ 3,684,529		$ (2,755,732)	$ (1,949,901)	$ 14,786,036	1,869,191,848	0.00686721	1000	$ 6.87	$ 82.41
2028	$ 9,164,164	$ 13,513,943	$ 2,416,544	$ 122,606	7.00%	$ 3,684,529		$ (2,755,732)	$ (2,173,688)	$ 14,565,346	1,831,808,011	0.00676471	1000	$ 6.76	$ 81.18
2029	$ 9,164,164	$ 11,580,708	$ -	$ -	7.00%	$ 3,684,529		$ (2,755,732)	$ (2,079,733)	$ 12,509,505	1,795,171,850	0.00580990	1000	$ 5.81	$ 69.72
2030	$ 9,164,164	$ 9,164,164	$ -	$ -	7.00%	$ 3,684,529		$ (2,755,732)	$ (1,846,277)	$ 10,092,961	1,759,268,413	0.00468756	1000	$ 4.69	$ 56.25
		10-Year Total		$ 6,975,673					$ (14,081,247)						

10-Yr Totals	$ 137,489,615	$ 6,975,673
Modeled Rate of Return		7.00%
Add'l Return via Savings		$ 5,103,044
Adjusted Rate of Return		12.12%

Total Savings @2% reduction/yr	$ 14,081,247
50% of Savings to Ratepayers	$ 7,040,623
50% of Savings to Utilities	$ 7,040,623

Adjusted 10-Year Total $ 12,078,717

Utility **PEPCO**

<u>Data Source</u>
PSC Case 9494
PSC Item 174
PSC Maillog 227502
Date 11/15/2019

Amortization of Program Costs

[redacted]

<u>Notes</u>
Tax Rate - State and Federal 27.52%
Residential program costs reduced by WGL Billing Coord. amt. ($1,682,363)
Federal Tax Credit ends in 2022
Pay off Unamortized Debt in 10 Years and Continue Program
Net Operating Costs only from Dynamic Pricing and Direct Load Control
Wholesale Revenues assumed to remain consistent
Decrease Rate of Return/WACC to 7%
Performance Incentive Incorporated

Scenario 5: Performance Incentive with Longer Term Repayment Reduced ROR

									Excess Ratepayer Revenues	Hold Constant to Scenario 4b	Annual Savings 2.0%	Hold Constant to Scenario 4b			
<u>Inputs</u>															
Residential	$ 20,473,677	$ 23,809,883	$ 62,201,419				$ (2,503,714)	$ (887,955)	$ 85,730		5522043269				
C&I															
DP - Resid						$ 2,698,445		$ (679,383)	$ (1,526,260)		incl. above				
DL - Resid	$ 5,395,101	$ 4,964,191	$ 27,458,161			$ 12,720,912	$ (1,173,503)	$ (3,671,290)	$ (860,145)		incl. above				
DL - C&I															

(1) Year	(2) Program Cost	(3) Amortization	(4) Unamortized Balance (Prior UB)+(2)-(3)	(5) Return to Utility (4) * (6) * (.7248)	(6) Utility WACC / Rate of Return	(7) Net Operating Costs (Current Year Expense)	(8) Federal Tax Credit	(9) Wholesale Revenue	(10) True Up	(11) Ratepayer Revenue Requirement (12) * (13)	(12) Projected Electricity Sales (kWh)	(13) Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (11)	(14) Average kWh/Month per Ratepayer	(15) Estimated Monthly Bill Impact per Ratepayer	(16) Estimated Annual Bill Impact per Ratepayer
2020	$ 25,868,778	$ 28,774,074	$ 89,659,580	$ 6,033,882	9.29%	$ 15,419,357	$ (3,677,217)	$ (5,238,628)	$ (2,300,675)	$ 39,010,793	5,522,043,269	0.00706456	1000	$ 7.06	$ 84.77
2021	$ 25,868,778	$ 30,500,518	$ 85,027,840	$ 4,313,972	7.00%	$ 15,419,357	$ (3,677,217)	$ (5,238,628)	$ (826,360)	$ 41,318,003	5,411,602,404	0.00748238	1000	$ 7.48	$ 89.79
2022	$ 25,868,778	$ 33,550,570	$ 77,346,047	$ 3,924,229	7.00%	$ 15,419,357	$ (3,677,217)	$ (5,238,628)	$ (1,741,541)	$ 43,978,311	5,303,370,356	0.00796414	1000	$ 7.96	$ 95.57
2023	$ 25,868,778	$ 33,603,383	$ 69,611,443	$ 3,531,806	7.00%	$ 15,419,357		$ (5,238,628)	$ (2,782,554)	$ 47,315,918	5,197,302,948	0.00856855	1000	$ 8.57	$ 102.82
2024	$ 25,868,778	$ 38,398,838	$ 57,081,383	$ 2,896,081	7.00%	$ 15,419,357		$ (5,238,628)	$ (3,996,149)	$ 51,475,648	5,093,356,889	0.00932185	1000	$ 9.32	$ 111.86
2025	$ 25,868,778	$ 38,398,838	$ 44,551,323	$ 2,260,356	7.00%	$ 15,419,357		$ (5,238,628)	$ (4,884,659)	$ 50,839,923	4,991,489,752	0.00920672	1000	$ 9.21	$ 110.48
2026	$ 25,868,778	$ 38,398,838	$ 32,021,264	$ 1,624,631	7.00%	$ 15,419,357		$ (5,238,628)	$ (5,731,192)	$ 50,204,197	4,891,659,957	0.00909160	1000	$ 9.09	$ 109.10
2027	$ 25,868,778	$ 38,398,838	$ 19,491,204	$ 988,906	7.00%	$ 15,419,357		$ (5,238,628)	$ (6,536,816)	$ 49,568,472	4,793,826,758	0.00897647	1000	$ 8.98	$ 107.72
2028	$ 25,868,778	$ 38,398,838	$ 6,961,144	$ 353,181	7.00%	$ 15,419,357		$ (5,238,628)	$ (7,302,575)	$ 48,932,747	4,697,950,222	0.00886135	1000	$ 8.86	$ 106.34
2029	$ 25,868,778	$ 32,829,922	$ -	$ -	7.00%	$ 15,419,357		$ (5,238,628)	$ (7,150,617)	$ 43,010,651	4,603,991,218	0.00778890	1000	$ 7.79	$ 93.47
2030	$ 25,868,778	$ 25,868,778	$ -	$ -	7.00%	$ 15,419,357		$ (5,238,628)	$ (6,594,435)	$ 36,049,507	4,511,911,394	0.00652829	1000	$ 6.53	$ 78.34
		10-Year Total		$ 19,893,162					$ (47,546,899)						

10-Yr Totals	$ 392,091,647	$ 19,893,162
Modeled Rate of Return		7.00%
Add'l Return via Savings		$ 17,230,996
Adjusted Rate of Return		13.06%

Total Savings @2% reduction/yr	$ 47,546,899
50% of Savings to Ratepayers	$ 23,773,450
50% of Savings to Utilities	$ 23,773,450

Adjusted 10-Year Total $ 37,124,158

Utility **Potomac Edison**

[redacted]

Data Source

PSC Case	9494
PSC Item	179
PSC Maillog	227637
Date	11/25/2019

Notes

Tax Rate - State and Federal 27.52%
PEPCO amortizes over 6 years per filings, not 5 years
Pay off Unamortized Debt in 10 Years and Continue Program
No Dynamic Pricing program data in Filing
Wholesale Revenues assumed to remain consistent
Decrease Rate of Return/WACC to 7%
Performance Incentive Incorporated

Scenario 5: Performance Incentive with Longer Term Repayment Reduced ROR

							Excess Ratepayer Revenues	Hold Constant to Scenario 4b	Annual Savings 2.0%	Hold Constant to Scenario 4b			
Inputs													
Residential	$ 25,454,331	$ 19,435,856	$ 95,005,356						3320026453				
Comm'l													
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (10) * (11)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8) / (10)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 25,454,331	$ 19,435,856	$ 95,005,356	$ 6,260,853	9.09%			$ 25,696,709	3,320,026,453	0.00773991	1000	$ 7.74	$ 92.88
2021	$ 25,454,331	$ 20,602,007	$ 99,857,680	$ 5,066,379	7.00%		$ (513,368)	$ 25,668,387	3,253,625,924	0.00773138	1000	$ 7.73	$ 92.78
2022	$ 25,454,331	$ 22,662,208	$ 102,649,803	$ 5,208,040	7.00%		$ (1,103,662)	$ 27,870,248	3,188,553,405	0.00839459	1000	$ 8.39	$ 100.74
2023	$ 25,454,331	$ 35,719,311	$ 92,384,822	$ 4,687,236	7.00%		$ (2,376,228)	$ 40,406,548	3,124,782,337	0.01217055	1000	$ 12.17	$ 146.05
2024	$ 25,454,331	$ 42,083,599	$ 75,755,554	$ 3,843,534	7.00%		$ (3,565,408)	$ 45,927,133	3,062,286,691	0.01383336	1000	$ 13.83	$ 166.00
2025	$ 25,454,331	$ 42,083,599	$ 59,126,286	$ 2,999,831	7.00%		$ (4,331,580)	$ 45,083,430	3,001,040,957	0.01357924	1000	$ 13.58	$ 162.95
2026	$ 25,454,331	$ 42,083,599	$ 42,497,018	$ 2,156,129	7.00%		$ (5,050,302)	$ 44,239,728	2,941,020,138	0.01332511	1000	$ 13.33	$ 159.90
2027	$ 25,454,331	$ 42,083,599	$ 25,867,750	$ 1,312,426	7.00%		$ (5,722,828)	$ 43,396,025	2,882,199,735	0.01307099	1000	$ 13.07	$ 156.85
2028	$ 25,454,331	$ 42,083,599	$ 9,238,482	$ 468,724	7.00%		$ (6,350,380)	$ 42,552,323	2,824,555,740	0.01281686	1000	$ 12.82	$ 153.80
2029	$ 25,454,331	$ 34,692,813	$ -	$ -	7.00%		$ (5,767,758)	$ 34,692,813	2,768,064,625	0.01044956	1000	$ 10.45	$ 125.39
2030	$ 25,454,331	$ 25,454,331	$ -	$ -	7.00%		$ (4,656,289)	$ 25,454,331	2,712,703,333	0.00766691	1000	$ 7.67	$ 92.00
		10-Year Total		$ 25,742,300			$ (39,437,803)						

10-Yr Totals	$ 507,377,396	$ 25,742,300	Total Savings @2% reduction/y	$ 39,437,803
Modeled Rate of Return		7.00%	50% of Savings to Ratepayers	$ 19,718,901
Add'l Return via Savings		$ 14,292,260	50% of Savings to Utilities	$ 19,718,901
Adjusted Rate of Return		10.89%		

Adjusted 10-Year Total $ 40,034,559

Utility **SMECO**

Data Source

PSC Case	9494
PSC Item	177
PSC Maillog	227606
Date	11/22/2019

Notes

Tax Rate - State and Federal 0.00%

Unamortized Balance not available in filings; extrapolated from 4/19 CRWG report

Pay off Unamortized Debt in 10 Years and Continue Program

Net Operating Costs only from Cool Sentry programs

Wholesale Revenues assumed to remain consistent

Reduce Rate of Return/WACC to 5.10%

Performance Incentive Incorporated

Amortization of Program Costs

[redacted]

Scenario 5: Performance Incentive with Longer Term Repayment Reduced ROR

								Excess Ratepayer	Hold Constant	Annual Savings	Hold Constant
Inputs											
Residential	$ 14,007,234	$ 12,588,847	$ 35,386,698					$ 183,932		2212848756	
Comm'l											
Cool Sent- Res						$ 6,065,334		$ (606,603)			
Cool Sent - CI											
								Revenues	to Scenario 4b	2.0%	to Scenario 4b

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (11) * (12)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9) / (10)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 14,007,234	$ 12,588,847	$ 35,386,698	$ 2,165,666	6.12%	$ 6,065,334		$ (422,671)	$ 14,331,842	2,212,848,756	0.00647665	1000	$ 6.48	$ 77.72
2021	$ 14,007,234	$ 13,344,178	$ 36,049,754	$ 1,838,537	5.10%	$ 6,065,334		$ (303,654)	$ 15,182,715	2,168,591,781	0.00686116	1000	$ 6.86	$ 82.33
2022	$ 14,007,234	$ 14,678,596	$ 35,378,393	$ 1,804,298	5.10%	$ 6,065,334		$ (652,723)	$ 16,482,894	2,125,219,945	0.00744872	1000	$ 7.45	$ 89.38
2023	$ 14,007,234	$ 17,545,073	$ 31,840,553	$ 1,623,868	5.10%	$ 6,065,334		$ (1,127,287)	$ 19,168,941	2,082,715,546	0.00866256	1000	$ 8.66	$ 103.95
2024	$ 14,007,234	$ 19,738,534	$ 26,109,254	$ 1,331,572	5.10%	$ 6,065,334		$ (1,635,711)	$ 21,070,106	2,041,061,235	0.00952171	1000	$ 9.52	$ 114.26
2025	$ 14,007,234	$ 19,738,534	$ 20,377,954	$ 1,039,276	5.10%	$ 6,065,334		$ (1,996,315)	$ 20,777,809	2,000,240,011	0.00938962	1000	$ 9.39	$ 112.68
2026	$ 14,007,234	$ 19,738,534	$ 14,646,655	$ 746,979	5.10%	$ 6,065,334		$ (2,338,577)	$ 20,485,513	1,960,235,211	0.00925753	1000	$ 9.26	$ 111.09
2027	$ 14,007,234	$ 19,738,534	$ 8,915,355	$ 454,683	5.10%	$ 6,065,334		$ (2,662,970)	$ 20,193,217	1,921,030,506	0.00912544	1000	$ 9.13	$ 109.51
2028	$ 14,007,234	$ 19,738,534	$ 3,184,055	$ 162,387	5.10%	$ 6,065,334		$ (2,969,953)	$ 19,900,920	1,882,609,896	0.00899335	1000	$ 8.99	$ 107.92
2029	$ 14,007,234	$ 17,191,289	$ -	$ -	5.10%	$ 6,065,334		$ (2,858,090)	$ 17,191,289	1,844,957,698	0.00776885	1000	$ 7.77	$ 93.23
2030	$ 14,007,234	$ 14,007,234	$ -	$ -	5.10%	$ 6,065,334		$ (2,562,304)	$ 14,007,234	1,808,058,544	0.00632996	1000	$ 6.33	$ 75.96
		10-Year Total		$ 9,001,601				$ (19,107,585)						

10-Yr Totals	$ 176,501,973	$ 9,001,601
Modeled Rate of Return		5.10%
Add'l Return via Savings		$ 9,553,793
Adjusted Rate of Return		10.51%

Total Savings @2% reduction/yr	$ 19,107,585
50% of Savings to Ratepayers	$ 9,553,793
50% of Savings to Utilities	$ 9,553,793

Adjusted 10-Year Total $ 18,555,393

Utility **Washington Gas & Light**

Data Source

PSC Case	9494
PSC Item	171
PSC Maillog	227417
Date	11/18/2019

Amortization of Program Costs

[redacted]

Notes

Tax Rate - State and Federal 27.52%
Pay off Unamortized Debt in 10 Years and Continue Program
No Dynamic Pricing program data in Filing
Wholesale Revenues assumed to remain consistent
Monthly therm estimate based on total Res and C&I accounts (492,943)
Decrease Rate of Return/WACC to 7%
Performance Incentive Incorporated

Scenario 5: Performance Incentive with Longer Term Repayment Reduced ROR

Inputs

Residential	9943800	4150254	$ 26,113,516		376,656,000
Commercial					

							Excess Ratepayer Revenues	Hold Constant to Scenario 4b	Annual Savings 2.0%	Hold Constant to Scenario 4b			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (10) * (11)	Projected Gas Sales (Therms)	Ratepayer Surcharge (3)+(5)+(7)+(8) / (10)	Average Therm/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 9,943,800	$ 4,150,254	$ 26,113,516	$ 1,820,785	9.62%			$ 5,971,039	376,656,000	0.01585276	120	$ 1.91	$ 22.88
2021	$ 9,943,800	$ 4,399,269	$ 31,658,047	$ 1,606,203	7.00%		$ (120,109)	$ 6,005,472	369,122,880	0.01594418	120	$ 1.92	$ 23.01
2022	$ 9,943,800	$ 4,839,196	$ 36,762,651	$ 1,865,190	7.00%		$ (265,494)	$ 6,704,386	361,740,422	0.01779976	120	$ 2.14	$ 25.69
2023	$ 9,943,800	$ 13,620,065	$ 33,086,386	$ 1,678,671	7.00%		$ (899,688)	$ 15,298,736	354,505,614	0.04061726	120	$ 4.88	$ 58.62
2024	$ 9,943,800	$ 15,899,349	$ 27,130,836	$ 1,376,510	7.00%		$ (1,341,157)	$ 17,275,859	347,415,502	0.04586641	120	$ 5.52	$ 66.19
2025	$ 9,943,800	$ 15,899,349	$ 21,175,287	$ 1,074,349	7.00%		$ (1,630,819)	$ 16,973,699	340,467,192	0.04506419	120	$ 5.42	$ 65.04
2026	$ 9,943,800	$ 15,899,349	$ 15,219,737	$ 772,189	7.00%		$ (1,903,183)	$ 16,671,538	333,657,848	0.04426197	120	$ 5.32	$ 63.88
2027	$ 9,943,800	$ 15,899,349	$ 9,264,188	$ 470,028	7.00%		$ (2,158,703)	$ 16,369,377	326,984,691	0.04345975	120	$ 5.23	$ 62.72
2028	$ 9,943,800	$ 15,899,349	$ 3,308,639	$ 167,867	7.00%		$ (2,397,823)	$ 16,067,216	320,444,997	0.04265753	120	$ 5.13	$ 61.56
2029	$ 9,943,800	$ 13,252,439	$ -	$ -	7.00%		$ (2,203,248)	$ 13,252,439	314,036,097	0.03518446	120	$ 4.23	$ 50.78
2030	$ 9,943,800	$ 9,943,800	$ -	$ -	7.00%		$ (1,818,991)	$ 9,943,800	307,755,375	0.02640022	120	$ 3.18	$ 38.10
		10-Year Total		$ 9,011,006			$ (14,739,215)						

10-Yr Totals	$ 177,605,770	$ 9,011,006	Total Savings @2% reduction/yr	$ 14,739,215
Modeled Rate of Return		7.00%	50% of Savings to Ratepayers	$ 7,369,608
Add'l Return via Savings		$ 5,341,492	50% of Savings to Utilities	$ 7,369,608
Adjusted Rate of Return		11.15%		

Adjusted 10-Year Total $ 14,352,498

Performance-Based Option 5a

Commercial Sector Analysis

All EmPower Utilities - C&I Only

Utility Financial Data - PSC Filings - Case 9494

PSC Item	PSC Maillog	Utility	Date
171	227417	WG&L	11/18/2019
174	227502	PEPCO	11/15/2019
175	227501	DP&L	11/15/2019
177	227606	SMECO	11/22/2019
179	227637	Potomac Ed	11/25/2019
181	227547	BGE	11/18/2019

Utility	WACC/Rate of Return	Proposed
WG&L	9.62%	7.00%
PEPCO	9.29%	7.00%
DPL	8.57%	7.00%
SMECO	6.12%	5.10%
Potomac Ed	9.09%	7.00%
BGE	9.51%	7.00%

Option 5a: Performance-Based Incentive with Longer Term Repayment & Reduced ROR

									Excess Ratepayer Revenues	Hold Constant to Option 4b		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year	Program Cost	Amortization	Unamortized Balance (Prior)+(2)-(3)	Return to Utility (4)*(6)*(.7248)	Imputed Utility Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 164,207,683	$119,809,585	$ 341,551,333	$ 22,888,720	9.25%	$ 6,012,536	$ (5,257,534)	$ (1,592,494)	$ (6,036,485)	$ 133,305,173	$ 3.54	$ 42.42
2021	$ 164,207,683	$126,998,160	$ 378,760,855	$ 19,222,545	7.00%	$ 6,012,536	$ (5,257,534)	$ (1,592,494)	$ (2,857,281)	$ 142,864,058	$ 3.79	$ 45.46
2022	$ 164,207,683	$139,697,976	$ 403,270,562	$ 20,466,838	7.00%	$ 6,012,536	$ (5,257,534)	$ (1,592,494)	$ (6,209,603)	$ 156,808,167	$ 4.16	$ 49.90
2023	$ 164,207,683	$204,534,739	$ 362,943,506	$ 18,420,154	7.00%	$ 6,012,536	$ -	$ (1,592,494)	$ (13,223,319)	$ 224,855,780	$ 5.96	$ 71.56
2024	$ 164,207,683	$229,537,514	$ 297,613,675	$ 15,104,526	7.00%	$ 6,012,536	$ -	$ (1,592,494)	$ (19,139,581)	$ 246,542,927	$ 6.54	$ 78.46
2025	$ 164,207,683	$229,537,514	$ 232,283,844	$ 11,788,899	7.00%	$ 6,012,536	$ -	$ (1,592,494)	$ (23,369,085)	$ 243,227,300	$ 6.45	$ 77.40
2026	$ 164,207,683	$229,537,514	$ 166,954,013	$ 8,473,271	7.00%	$ 6,012,536	$ -	$ (1,592,494)	$ (27,387,745)	$ 239,911,672	$ 6.36	$ 76.35
2027	$ 164,207,683	$229,537,514	$ 101,624,182	$ 5,157,643	7.00%	$ 6,012,536	$ -	$ (1,592,494)	$ (31,200,977)	$ 236,596,044	$ 6.27	$ 75.29
2028	$ 164,207,683	$229,537,514	$ 36,294,351	$ 1,842,015	7.00%	$ 6,012,536	$ -	$ (1,592,494)	$ (34,814,064)	$ 233,280,417	$ 6.19	$ 74.24
2029	$ 164,207,683	$200,502,034	$ -	$ -	7.00%	$ 6,012,536	$ -	$ (1,592,494)	$ (33,649,939)	$ 202,402,921	$ 5.37	$ 64.41
2030	$ 164,207,683	$164,207,683	$ -	$ -	7.00%	$ 6,012,536	$ -	$ (1,592,494)	$ (30,385,774)	$ 166,108,570	$ 4.41	$ 52.86
		10-Year Total		$100,475,891					$ (222,237,369)	$ 2,092,597,855	$ 5.37	

Apply Savings to Ratepayers

Year	Ratepayer Revenue Requirement	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 139,341,658	$ 3.70	$ 44.34
2021	$ 141,435,417	$ 3.75	$ 45.01
2022	$ 153,703,365	$ 4.08	$ 48.91
2023	$ 218,244,121	$ 5.79	$ 69.45
2024	$ 236,973,137	$ 6.28	$ 75.41
2025	$ 231,542,757	$ 6.14	$ 73.68
2026	$ 226,217,799	$ 6.00	$ 71.99
2027	$ 220,995,556	$ 5.86	$ 70.33
2028	$ 215,873,384	$ 5.72	$ 68.70
2029	$ 185,577,951	$ 4.92	$ 59.06
2030	$ 150,915,683	$ 4.00	$ 48.03
	$ 1,981,479,171	$ 5.11	

10-Yr Totals	$ 1,979,744,988	$100,475,891
Modeled Rate of Return		7.00%
Add'l Return via Savings		$ 80,538,823
Adjusted Rate of Return		12.61%

Adjusted 10-Year Total $181,014,713

Total Savings @2% reduction/yr	$ 222,237,369
50% of Savings to Ratepayers	$ 111,118,685
50% of Savings to Utilities	$ 111,118,685

Utility **Baltimore Gas and Electric**

Data Source
PSC Case 9494
PSC Item 181
PSC Maillog 227547
Date 11/18/2019

Notes
Tax Rate - State and Federal 27.52%
Pay off Unamortized Debt in 10 Years
Net Operating Costs only from Peak Rewards Riders 15 and 56
Wholesale Revenues assumed to remain consistent
Decrease Rate of Return/WACC to 7%
Performance Incentive Incorporated

Amortization of Program Costs

[redacted]

Scenario 5: Performance Incentive with Longer Term Repayment Reduced ROR

Inputs														
								Excess Ratepayer	Hold Constant	Annual Savings	Hold Constant			
Residential														
Commercial	$ 55,158,263	$ 52,231,207	$ 128,973,493	$ 4,906,441			$ (439,391)	$ (2,677,807)		16,399,051,000				
Adjustment		$ 706,586												
Peak Rew 15														
Peak Rew 56						$ 2,151,270				incl. above				
								Revenues	to Scenario 4b	2.0%	to Scenario 4b			

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (11) * (12)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9) / (11)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 55,158,263	$ 52,937,793	$ 128,973,493	$ 8,889,947	9.51%	2,151,270	$ (439,391)	$ (2,677,807)	$ 60,861,812	16,399,051,000	0.00371130	1000	$ 3.71	$ 44.54
2021	$ 55,158,263	$ 56,114,061	$ 128,017,695	$ 6,495,106	7.00%	2,151,270	$ (439,391)	$ (1,286,421)	$ 64,321,045	16,071,069,980	0.00392224	1000	$ 3.92	$ 47.07
2022	$ 55,158,263	$ 61,725,467	$ 121,450,492	$ 6,161,912	7.00%	2,151,270	$ (439,391)	$ (2,756,131)	$ 69,599,258	15,749,648,580	0.00424410	1000	$ 4.24	$ 50.93
2023	$ 55,158,263	$ 67,303,312	$ 109,305,443	$ 5,545,721	7.00%	2,151,270	$ (439,391)	$ (4,384,778)	$ 74,560,912	15,434,655,609	0.00454666	1000	$ 4.55	$ 54.56
2024	$ 55,158,263	$ 74,833,243	$ 89,630,463	$ 4,547,491	7.00%	2,151,270	$ (439,391)	$ (6,295,369)	$ 81,092,613	15,125,962,497	0.00494496	1000	$ 4.94	$ 59.34
2025	$ 55,158,263	$ 74,833,243	$ 69,955,483	$ 3,549,261	7.00%	2,151,270	$ (439,391)	$ (7,695,405)	$ 80,094,383	14,823,443,247	0.00488409	1000	$ 4.88	$ 58.61
2026	$ 55,158,263	$ 74,833,243	$ 50,280,504	$ 2,551,032	7.00%	2,151,270	$ (439,391)	$ (9,029,429)	$ 79,096,153	14,526,974,382	0.00482322	1000	$ 4.82	$ 57.88
2027	$ 55,158,263	$ 74,833,243	$ 30,605,524	$ 1,552,802	7.00%	2,151,270	$ (439,391)	$ (10,299,122)	$ 78,097,924	14,236,434,894	0.00476234	1000	$ 4.76	$ 57.15
2028	$ 55,158,263	$ 74,833,243	$ 10,930,544	$ 554,572	7.00%	2,151,270	$ (439,391)	$ (11,506,125)	$ 77,099,694	13,951,706,196	0.00470147	1000	$ 4.70	$ 56.42
2029	$ 55,158,263	$ 66,088,807	$ -	$ -	7.00%	2,151,270	$ (439,391)	$ (11,272,016)	$ 67,800,686	13,672,672,072	0.00413443	1000	$ 4.13	$ 49.61
2030	$ 55,158,263	$ 55,158,263	$ -	$ -	7.00%	2,151,270	$ (439,391)	$ (10,403,095)	$ 56,870,142	13,399,218,631	0.00346789	1000	$ 3.47	$ 41.61
		10-Year Total		$ 30,957,897				$ (74,927,890)					$ 4.38	

10-Yr Totals	$ 610,176,148	$ 30,957,897
Modeled Rate of Return		7.00%
Add'l Return via Savings		$ 27,153,867
Adjusted Rate of Return		13.14%

Total Savings @2% reduction/yr	$ 74,927,890
50% of Savings to Ratepayers	$ 37,463,945
50% of Savings to Utilities	$ 37,463,945

Adjusted 10-Year Total $ 58,111,764

Utility **Delmarva Power and Light**

Amortization of Program Costs

[redacted]

Data Source

PSC Case	9494
PSC Item	175
PSC Maillog	227501
Date	11/15/2019

Notes

Tax Rate - State and Federal 27.52%

Netted out CIF merger contributions for 2018-2020 for projection purposes

Federal Tax Credit ends in 2022

Pay off Unamortized Debt in 10 Years and Continue Program

Net Operating Costs only from Dynamic Pricing and Direct Load Control

Wholesale Revenues assumed to remain consistent

Decrease Rate of Return/WACC to 7%

Performance Incentive Incorporated

Scenario 5: Performance Incentive with Longer Term Repayment Reduced ROR

Inputs	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10) Excess Ratepayer Revenues	(11) Hold Constant to Scenario 4b	(12) Annual Savings 2.0%	(13) Hold Constant to Scenario 4b
Residential												
C&I	$ 18,201,871	$ 8,720,286	$ 23,361,655				$ (1,097,687)	$ (339,994)	$ (137,938)		1929641791	
DP - Resid												
DL - Resid												
DL - C&I	$ 121,491	$ 126,842	$ 730,112			$ 435,491	$ (21,664)	$ -	$ (35,674)		incl. above	

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (12) * (13)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (12)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 18,323,362	$ 8,847,128	$ 24,091,767	$ 1,496,099	8.57%	$ 435,491	$ (1,119,351)	$ (339,994)	$ (173,612)	$ 9,145,761	1,929,641,791	0.00473962	1000	$ 4.74	$ 56.88
2021	$ 18,323,362	$ 9,377,956	$ 33,037,173	$ 1,676,174	7.00%	$ 435,491	$ (1,119,351)	$ (339,994)	$ (200,606)	$ 10,030,276	1,891,048,955	0.00519800	1000	$ 5.20	$ 62.38
2022	$ 18,323,362	$ 10,315,751	$ 41,044,784	$ 2,082,448	7.00%	$ 435,491	$ (1,119,351)	$ (339,994)	$ (450,424)	$ 11,374,345	1,853,227,976	0.00589454	1000	$ 5.89	$ 70.73
2023	$ 18,323,362	$ 22,427,840	$ 36,940,306	$ 1,874,203	7.00%	$ 435,491		$ (339,994)	$ (1,434,771)	$ 24,397,541	1,816,163,417	0.01264356	1000	$ 12.64	$ 151.72
2024	$ 18,323,362	$ 24,972,617	$ 30,291,051	$ 1,536,847	7.00%	$ 435,491		$ (339,994)	$ (2,065,392)	$ 26,604,961	1,779,840,148	0.01378751	1000	$ 13.79	$ 165.45
2025	$ 18,323,362	$ 24,972,617	$ 23,641,796	$ 1,199,490	7.00%	$ 435,491		$ (339,994)	$ (2,523,770)	$ 26,267,604	1,744,243,345	0.01361268	1000	$ 13.61	$ 163.35
2026	$ 18,323,362	$ 24,972,617	$ 16,992,541	$ 862,134	7.00%	$ 435,491		$ (339,994)	$ (2,960,135)	$ 25,930,248	1,709,358,478	0.01343786	1000	$ 13.44	$ 161.25
2027	$ 18,323,362	$ 24,972,617	$ 10,343,286	$ 524,777	7.00%	$ 435,491		$ (339,994)	$ (3,375,049)	$ 25,592,891	1,675,171,309	0.01326303	1000	$ 13.26	$ 159.16
2028	$ 18,323,362	$ 24,972,617	$ 3,694,031	$ 187,420	7.00%	$ 435,491		$ (339,994)	$ (3,769,060)	$ 25,255,534	1,641,667,883	0.01308820	1000	$ 13.09	$ 157.06
2029	$ 18,323,362	$ 22,017,393	$ -	$ -	7.00%	$ 435,491		$ (339,994)	$ (3,676,317)	$ 22,112,890	1,608,834,525	0.01145958	1000	$ 11.46	$ 137.51
2030	$ 18,323,362	$ 18,323,362	$ -	$ -	7.00%	$ 435,491		$ (339,994)	$ (3,369,310)	$ 18,418,859	1,576,657,834	0.00954522	1000	$ 9.55	$ 114.54
		10-Year Total		$ 9,943,493					$ (23,824,834)					$ 10.61	

10-Yr Totals	$ 195,984,966	$ 9,943,493
Modeled Rate of Return		7.00%
Add'l Return via Savings		$ 8,634,120
Adjusted Rate of Return		13.08%

Adjusted 10-Year Total $ 18,577,613

Total Savings @2% reduction/yr	$ 23,824,834
50% of Savings to Ratepayers	$ 11,912,417
50% of Savings to Utilities	$ 11,912,417

Utility **PEPCO**

Data Source
PSC Case 9494
PSC Item 174
PSC Maillog 227502
Date 11/15/2019

Amortization of Program Costs

[redacted]

Notes
Tax Rate - State and Federal 27.52%
Residential program costs reduced by WGL Billing Coord. amt. ($1,682,363)
Federal Tax Credit ends in 2022
Pay off Unamortized Debt in 10 Years and Continue Program
Net Operating Costs only from Dynamic Pricing and Direct Load Control
Wholesale Revenues assumed to remain consistent
Decrease Rate of Return/WACC to 7%
Performance Incentive Incorporated

Scenario 5: Performance Incentive with Longer Term Repayment Reduced ROR

									Excess Ratepayer	Hold Constant	Annual Savings	Hold Constant			
Inputs															
Residential															
C&I	$ 52,795,832	$ 38,988,961	$ 100,044,277				$ (4,066,432)	$ (813,109)	$ (3,499,098)		8531609067				
DP - Resid															
DL - Resid															
DL - C&I	$ 441,832	$ 224,698	$ 1,872,126			$ 906,620	$ (71,751)		$ (40,359)		incl. above				
									Revenues	to Scenario 4b	2.0%	to Scenario 4b			

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (12) * (13)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (11)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 53,237,664	$ 39,213,659	$ 101,916,403	$ 6,858,737	9.29%	$ 906,620	$ (4,138,183)	$ (813,109)	$ (3,539,457)	$ 38,488,267	8,531,609,067	0.00451126	1000	$ 4.51	$ 54.14
2021	$ 53,237,664	$ 41,566,479	$ 113,587,588	$ 5,762,980	7.00%	$ 906,620	$ (4,138,183)	$ (813,109)	$ (865,696)	$ 43,284,786	8,360,976,886	0.00507346	1000	$ 5.07	$ 60.88
2022	$ 53,237,664	$ 45,723,126	$ 121,102,126	$ 6,144,237	7.00%	$ 906,620	$ (4,138,183)	$ (813,109)	$ (1,893,779)	$ 47,822,692	8,193,757,348	0.00560535	1000	$ 5.61	$ 67.26
2023	$ 53,237,664	$ 65,347,877	$ 108,991,913	$ 5,529,814	7.00%	$ 906,620		$ (813,109)	$ (4,173,674)	$ 70,971,201	8,029,882,201	0.00831862	1000	$ 8.32	$ 99.82
2024	$ 53,237,664	$ 72,856,208	$ 89,373,369	$ 4,534,447	7.00%	$ 906,620		$ (813,109)	$ (6,015,238)	$ 77,484,167	7,869,284,557	0.00908201	1000	$ 9.08	$ 108.98
2025	$ 53,237,664	$ 72,856,208	$ 69,754,825	$ 3,539,081	7.00%	$ 906,620		$ (813,109)	$ (7,348,983)	$ 76,488,800	7,711,898,866	0.00896534	1000	$ 8.97	$ 107.58
2026	$ 53,237,664	$ 72,856,208	$ 50,136,280	$ 2,543,714	7.00%	$ 906,620		$ (813,109)	$ (8,618,151)	$ 75,493,434	7,557,660,889	0.00884867	1000	$ 8.85	$ 106.18
2027	$ 53,237,664	$ 72,856,208	$ 30,517,736	$ 1,548,348	7.00%	$ 906,620		$ (813,109)	$ (9,824,393)	$ 74,498,067	7,406,507,671	0.00873201	1000	$ 8.73	$ 104.78
2028	$ 53,237,664	$ 72,856,208	$ 10,899,191	$ 552,981	7.00%	$ 906,620		$ (813,109)	$ (10,969,321)	$ 73,502,701	7,258,377,517	0.00861534	1000	$ 8.62	$ 103.38
2029	$ 53,237,664	$ 64,136,855	$ -	$ -	7.00%	$ 906,620		$ (813,109)	$ (10,678,442)	$ 64,230,366	7,113,209,967	0.00752852	1000	$ 7.53	$ 90.34
2030	$ 53,237,664	$ 53,237,664	$ -	$ -	7.00%	$ 906,620		$ (813,109)	$ (9,755,722)	$ 53,331,175	6,970,945,768	0.00625101	1000	$ 6.25	$ 75.01
		10-Year Total		$ 30,155,603					$ (70,143,399)					$ 7.41	

10-Yr Totals	$ 594,363,029	$ 30,155,603
Modeled Rate of Return		7.00%
Add'l Return via Savings		$ 25,419,968
Adjusted Rate of Return		12.90%

Total Savings @2% reduction/yr	$ 70,143,399
50% of Savings to Ratepayers	$ 35,071,699
50% of Savings to Utilities	$ 35,071,699

Adjusted 10-Year Total $ 55,575,570

Utility **Potomac Edison**

[redacted]

Data Source

PSC Case	9494
PSC Item	179
PSC Maillog	227637
Date	11/25/2019

Notes

Tax Rate - State and Federal 27.52%
PEPCO amortizes over 6 years per filings, not 5 years
Pay off Unamortized Debt in 10 Years and Continue Program
No Dynamic Pricing program data in Filing
Wholesale Revenues assumed to remain consistent
Decrease Rate of Return/WACC to 7%
Performance Incentive Incorporated

Scenario 5: Performance Incentive with Longer Term Repayment Reduced ROR

							Excess Ratepayer Revenues	Hold Constant to Scenario 4b	Annual Savings 2.0%	Hold Constant to Scenario 4b			
Inputs													
Residential													
Comm'l	$ 25,551,316	$ 11,509,452	$ 62,125,839						3614682090				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (10) * (11)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8) / (10)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 25,551,316	$ 11,509,452	$ 62,125,839	$ 4,094,093	9.09%			$ 15,603,545	3,614,682,090	0.00431671	1000	$ 4.32	$ 51.80
2021	$ 25,551,316	$ 12,200,019	$ 75,477,136	$ 3,829,408	7.00%		$ (320,589)	$ 16,029,427	3,542,388,448	0.00443453	1000	$ 4.43	$ 53.21
2022	$ 25,551,316	$ 13,420,021	$ 87,608,431	$ 4,444,901	7.00%		$ (707,451)	$ 17,864,922	3,471,540,679	0.00494232	1000	$ 4.94	$ 59.31
2023	$ 25,551,316	$ 34,312,159	$ 78,847,588	$ 4,000,411	7.00%		$ (2,253,086)	$ 38,312,570	3,402,109,866	0.01059915	1000	$ 10.60	$ 127.19
2024	$ 25,551,316	$ 39,743,882	$ 64,655,022	$ 3,280,337	7.00%		$ (3,340,049)	$ 43,024,219	3,334,067,668	0.01190263	1000	$ 11.90	$ 142.83
2025	$ 25,551,316	$ 39,743,882	$ 50,462,456	$ 2,560,263	7.00%		$ (4,064,549)	$ 42,304,145	3,267,386,315	0.01170342	1000	$ 11.70	$ 140.44
2026	$ 25,551,316	$ 39,743,882	$ 36,269,890	$ 1,840,189	7.00%		$ (4,747,139)	$ 41,584,071	3,202,038,589	0.01150421	1000	$ 11.50	$ 138.05
2027	$ 25,551,316	$ 39,743,882	$ 22,077,325	$ 1,120,115	7.00%		$ (5,388,918)	$ 40,863,997	3,137,997,817	0.01130500	1000	$ 11.31	$ 135.66
2028	$ 25,551,316	$ 39,743,882	$ 7,884,759	$ 400,041	7.00%		$ (5,990,958)	$ 40,143,923	3,075,237,861	0.01110580	1000	$ 11.11	$ 133.27
2029	$ 25,551,316	$ 33,436,075	$ -	$ -	7.00%		$ (5,558,822)	$ 33,436,075	3,013,733,103	0.00925007	1000	$ 9.25	$ 111.00
2030	$ 25,551,316	$ 25,551,316	$ -	$ -	7.00%		$ (4,674,031)	$ 25,551,316	2,953,458,441	0.00706876	1000	$ 7.07	$ 84.83
		10-Year Total		$ 21,475,666			$ (37,045,590)					$ 8.92	

10-Yr Totals	$ 423,282,606	$ 21,475,666	Total Savings @2% reduction/y	$ 37,045,590
Modeled Rate of Return		7.00%	50% of Savings to Ratepayers	$ 18,522,795
Add'l Return via Savings		$ 13,425,322	50% of Savings to Utilities	$ 18,522,795
Adjusted Rate of Return		11.38%		

Adjusted 10-Year Total $ 34,900,988

Utility **SMECO**

Data Source

PSC Case	9494
PSC Item	177
PSC Maillog	227606
Date	11/22/2019

Notes

Tax Rate - State and Federal 0.00%

Unamortized Balance not available in filings; extrapolated from 4/19 CRWG report

Pay off Unamortized Debt in 10 Years and Continue Program

Net Operating Costs only from Cool Sentry programs

Wholesale Revenues assumed to remain consistent

Reduce Rate of Return/WACC to 5.10%

Performance Incentive Incorporated

Amortization of Program Costs

[redacted]

Scenario 5: Performance Incentive with Longer Term Repayment Reduced ROR

									Excess Ratepayer Revenues	Hold Constant to Scenario 4b	Annual Savings 2.0%	Hold Constant to Scenario 4b			
Inputs															
Residential															
Comm'l	$ 10,429,718	$ 6,447,626	$ 18,123,995						$ (228,873)		1318547114				
Cool Sent- Res															
Cool Sent - CI							$ 2,519,155		$ 583,264						

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (11) * (12)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9) / (10)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 10,429,718	$ 6,447,626	$ 18,123,995	$ 1,109,188	6.12%	$ 2,519,155		$ 354,391	$ 7,911,205	1,318,547,114	0.00599994	1000	$ 6.00	$ 72.00
2021	$ 10,429,718	$ 6,834,484	$ 21,719,229	$ 1,107,681	5.10%	$ 2,519,155		$ (158,843)	$ 7,942,164	1,292,176,172	0.00602342	1000	$ 6.02	$ 72.28
2022	$ 10,429,718	$ 7,517,932	$ 24,631,015	$ 1,256,182	5.10%	$ 2,519,155		$ (347,455)	$ 8,774,114	1,266,332,648	0.00665438	1000	$ 6.65	$ 79.85
2023	$ 10,429,718	$ 12,892,820	$ 22,167,914	$ 1,130,564	5.10%	$ 2,519,155		$ (824,687)	$ 14,023,383	1,241,005,995	0.01063548	1000	$ 10.64	$ 127.63
2024	$ 10,429,718	$ 14,419,942	$ 18,177,689	$ 927,062	5.10%	$ 2,519,155		$ (1,191,416)	$ 15,347,005	1,216,185,875	0.01163933	1000	$ 11.64	$ 139.67
2025	$ 10,429,718	$ 14,419,942	$ 14,187,465	$ 723,561	5.10%	$ 2,519,155		$ (1,454,976)	$ 15,143,503	1,191,862,158	0.01148499	1000	$ 11.48	$ 137.82
2026	$ 10,429,718	$ 14,419,942	$ 10,197,240	$ 520,059	5.10%	$ 2,519,155		$ (1,705,515)	$ 14,940,002	1,168,024,915	0.01133065	1000	$ 11.33	$ 135.97
2027	$ 10,429,718	$ 14,419,942	$ 6,207,016	$ 316,558	5.10%	$ 2,519,155		$ (1,943,368)	$ 14,736,500	1,144,664,416	0.01117632	1000	$ 11.18	$ 134.12
2028	$ 10,429,718	$ 14,419,942	$ 2,216,791	$ 113,056	5.10%	$ 2,519,155		$ (2,168,861)	$ 14,532,999	1,121,771,128	0.01102198	1000	$ 11.02	$ 132.26
2029	$ 10,429,718	$ 12,646,509	$ -	$ -	5.10%	$ 2,519,155		$ (2,102,510)	$ 12,646,509	1,099,335,706	0.00959125	1000	$ 9.59	$ 115.09
2030	$ 10,429,718	$ 10,429,718	$ -	$ -	5.10%	$ 2,519,155		$ (1,907,879)	$ 10,429,718	1,077,348,991	0.00791001	1000	$ 7.91	$ 94.92
		10-Year Total		$ 6,094,722				$ (13,805,511)					$ 9.41	

10-Yr Totals	$ 119,504,359	$ 6,094,722
Modeled Rate of Return		5.10%
Add'l Return via Savings		$ 6,902,755
Adjusted Rate of Return		10.88%

Total Savings @2% reduction/yr	$ 13,805,511
50% of Savings to Ratepayers	$ 6,902,755
50% of Savings to Utilities	$ 6,902,755

Adjusted 10-Year Total $ 12,997,478

Utility **Washington Gas & Light**

Data Source

PSC Case	9494
PSC Item	171
PSC Maillog	227417
Date	11/18/2019

Amortization of Program Costs

[redacted]

Notes

Tax Rate - State and Federal 27.52%

Pay off Unamortized Debt in 10 Years and Continue Program

No Dynamic Pricing program data in Filing

Wholesale Revenues assumed to remain consistent

Monthly therm estimate based on total Res and C&I accounts (492,943)

Decrease Rate of Return/WACC to 7%

Performance Incentive Incorporated

Scenario 5: Performance Incentive with Longer Term Repayment Reduced ROR

Inputs

							Excess Ratepayer	Hold Constant	Annual Savings	Hold Constant			
Residential													
Commercial	1507360	853927	$ 6,319,836						334,761,000				
							Revenues	to Scenario 4b	2.0%	to Scenario 4b			

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (10) * (11)	Projected Gas Sales (Therms)	Ratepayer Surcharge (3)+(5)+(7)+(8) / (10)	Average Therm/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 1,507,360	$ 853,927	$ 6,319,836	$ 440,655	9.62%			$ 1,294,582	334,761,000	0.00386718	57	$ 0.22	$ 2.63
2021	$ 1,507,360	$ 905,163	$ 6,922,033	$ 351,196	7.00%		$ (25,127)	$ 1,256,359	328,065,780	0.00375300	57	$ 0.21	$ 2.55
2022	$ 1,507,360	$ 995,679	$ 7,433,714	$ 377,157	7.00%		$ (54,364)	$ 1,372,836	321,504,464	0.00410094	57	$ 0.23	$ 2.78
2023	$ 1,507,360	$ 2,250,731	$ 6,690,343	$ 339,441	7.00%		$ (152,323)	$ 2,590,173	315,074,375	0.00773738	57	$ 0.44	$ 5.25
2024	$ 1,507,360	$ 2,711,622	$ 5,486,081	$ 278,342	7.00%		$ (232,116)	$ 2,989,964	308,772,888	0.00893164	57	$ 0.51	$ 6.07
2025	$ 1,507,360	$ 2,711,622	$ 4,281,820	$ 217,242	7.00%		$ (281,403)	$ 2,928,864	302,597,430	0.00874912	57	$ 0.50	$ 5.94
2026	$ 1,507,360	$ 2,711,622	$ 3,077,558	$ 156,143	7.00%		$ (327,377)	$ 2,867,765	296,545,481	0.00856660	57	$ 0.48	$ 5.82
2027	$ 1,507,360	$ 2,711,622	$ 1,873,296	$ 95,044	7.00%		$ (370,127)	$ 2,806,665	290,614,572	0.00838409	57	$ 0.47	$ 5.69
2028	$ 1,507,360	$ 2,711,622	$ 669,034	$ 33,944	7.00%		$ (409,740)	$ 2,745,566	284,802,280	0.00820157	57	$ 0.46	$ 5.57
2029	$ 1,507,360	$ 2,176,394	$ -	$ -	7.00%		$ (361,830)	$ 2,176,394	279,106,235	0.00650134	57	$ 0.37	$ 4.42
2030	$ 1,507,360	$ 1,507,360	$ -	$ -	7.00%		$ (275,737)	$ 1,507,360	273,524,110	0.00450279	57	$ 0.25	$ 3.06
		10-Year Total		$ 1,848,509			$ (2,490,146)					$ 0.38	

10-Yr Totals	$ 36,433,880	$ 1,848,509	Total Savings @2% reduction/yr	$ 2,490,146
Modeled Rate of Return		7.00%	50% of Savings to Ratepayers	$ 1,245,073
Add'l Return via Savings		$ 902,429	50% of Savings to Utilities	$ 1,245,073
Adjusted Rate of Return		10.42%		

Adjusted 10-Year Total $ 2,750,938

<u>Performance-Based Option 5b</u>

Residential Sector Analysis

All EmPower Utilities - Res Only

Utility Financial Data - PSC Filings - Case 9494

PSC Item	PSC Maillog	Utility	Date
171	227417	WG&L	11/18/2019
174	227502	PEPCO	11/15/2019
175	227501	DP&L	11/15/2019
177	227606	SMECO	11/22/2019
179	227637	Potomac Ed	11/25/2019
181	227547	BGE	11/18/2019

Performance-Based Incentive Model

Utility	Current WACC/ROR	Baseline WACC/ROR at <90% of Goal (<1.8% reduction)	Baseline WACC/ROR at >=90% of Goal (>=1.8% reduction)	Adjusted ROR After Split of Savings (if applic.)	ROR Cap Triggered?
WG&L	9.62%	8.62%	9.62%	10.59%	No
PEPCO	9.29%	8.29%	9.29%	10.69%	No
DPL	8.57%	7.57%	8.57%	9.75%	No
SMECO	6.12%	5.12%	6.12%	7.37%	No
Potomac Ed	9.09%	8.09%	9.09%	10.00%	No
BGE	9.51%	8.51%	9.51%	10.91%	No
Overall	9.25%	9.26%	9.25%	10.50%	

Note: ROR capped at 2% above Current WACC/ROR

Assumptions		
EmPOWER Goal for Annual Utility Sales Reduction	2.00%	fixed
Scenario Percentage Utility Sales Reduction	2.70%	input
(Note: do not enter zero)		
Savings Split Triggered for Exceeding Goal by:	110%	fixed
Savings Split Triggered by this Scenario?	Yes	formula

Note Regarding Amortization of Program Costs
Amortization (Column 3) is increased during 2021-2024 timeframe to new baseline that is approx. 50% above annual Program Costs (Column 2) to achieve accelerated paydown of Unamortized Balance (Column 4)

Option 5b: Performance-Based Incentive with Longer Term Repayment

(1) Year	(2) Program Cost	(3) Amortization	(4) Unamortized Balance (Prior)+(2)-(3)	(5) Return to Utility (4)*(6)*(.7248)	(6) Imputed Utility Rate of Return	(7) Net Operating Costs (Current Year Expense)	(8) Federal Tax Credit	(9) Wholesale Revenue	(10) Excess Ratepayer Revenues: True Up	(11) Hold Constant Opt 4 @ WACC: Ratepayer Revenue Requirement	(12) Estimated Monthly Bill Impact per Ratepayer	(13) Estimated Annual Bill Impact per Ratepayer
2020	$ 136,910,545	$ 124,699,894	$ 480,856,323	$ 32,227,731	9.25%	$ 64,311,937	$ (4,870,265)	$ (9,637,035)	$ (2,633,700)	$ 198,033,228	$ 6.31	$ 75.76
2021	$ 136,910,545	$ 132,181,888	$ 485,584,980	$ 32,565,231	9.25%	$ 64,311,937	$ (4,870,265)	$ (9,637,035)	$ (5,629,133)	$ 208,486,422	$ 6.65	$ 79.76
2022	$ 136,910,545	$ 145,400,076	$ 477,095,449	$ 32,020,996	9.26%	$ 64,311,937	$ (4,870,265)	$ (9,637,035)	$ (11,781,434)	$ 221,160,376	$ 7.05	$ 84.60
2023	$ 136,910,545	$ 184,620,090	$ 429,385,904	$ 28,818,897	9.26%	$ 64,311,937	$ -	$ (9,637,035)	$ (20,657,991)	$ 262,048,554	$ 8.35	$ 100.25
2024	$ 136,910,545	$ 214,200,008	$ 352,096,441	$ 23,631,495	9.26%	$ 64,311,937	$ -	$ (9,637,035)	$ (29,705,142)	$ 286,441,071	$ 9.13	$ 109.58
2025	$ 136,910,545	$ 214,200,008	$ 274,806,979	$ 18,444,094	9.26%	$ 64,311,937	$ -	$ (9,637,035)	$ (35,973,522)	$ 281,253,670	$ 8.97	$ 107.59
2026	$ 136,910,545	$ 214,200,008	$ 197,517,516	$ 13,256,692	9.26%	$ 64,311,937	$ -	$ (9,637,035)	$ (41,810,450)	$ 276,066,268	$ 8.80	$ 105.61
2027	$ 136,910,545	$ 214,200,008	$ 120,228,053	$ 8,069,291	9.26%	$ 64,311,937	$ -	$ (9,637,035)	$ (47,230,873)	$ 270,878,867	$ 8.64	$ 103.62
2028	$ 136,910,545	$ 214,200,008	$ 42,938,590	$ 2,881,890	9.26%	$ 64,311,937	$ -	$ (9,637,035)	$ (52,249,247)	$ 265,691,465	$ 8.47	$ 101.64
2029	$ 136,910,545	$ 179,849,135	$ -	$ -	9.26%	$ 64,311,937	$ -	$ (9,637,035)	$ (49,882,630)	$ 228,458,703	$ 7.28	$ 87.40
2030	$ 136,910,545	$ 136,910,545	$ -	$ -	9.26%	$ 64,311,937	$ -	$ (9,637,035)	$ (44,422,586)	$ 185,520,113	$ 5.91	$ 70.97
		10-Year Total		$159,688,586					$ (339,343,008)	$ 2,486,005,509	$ 7.78	

Year	Savings Applied to Ratepayers (91.32%): Ratepayer Revenue Requirement	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 315,335,060	$ 4.99	$ 59.91
2021	$ 203,345,791	$ 6.48	$ 77.79
2022	$ 210,401,347	$ 6.71	$ 80.49
2023	$ 243,183,287	$ 7.75	$ 93.03
2024	$ 259,313,774	$ 8.27	$ 99.20
2025	$ 248,401,970	$ 7.92	$ 95.02
2026	$ 237,884,176	$ 7.58	$ 91.00
2027	$ 227,746,741	$ 7.26	$ 87.12
2028	$ 217,976,467	$ 6.95	$ 83.39
2029	$ 182,904,944	$ 5.83	$ 69.97
2030	$ 144,952,569	$ 4.62	$ 55.45
	$ 2,176,111,066	$ 6.76	
	0.00	check	

10-Yr Totals	$ 2,379,653,913	$159,688,586
Modeled Rate of Return		9.26%
Add'l Return via Svgs (aft.tax)		$ 21,344,320
Adjusted Rate of Return		10.50%
Adjusted 10-Year Total		$181,032,907

Total Savings (from above)	$ 339,343,008
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 29,448,566
Savings to Ratepayers	$ 309,894,443
check	-

110% Target	$(280,445,877)

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Application of ROR cap at 2% above Current WACC/ROR by Utility

10-Yr Totals	$ 2,379,653,913	$159,688,586
Modeled Rate of Return		9.26%
Add'l Return via Svgs (aft.tax)		$ 21,344,320
Adjusted Rate of Return		10.50%
Adjusted 10-Year Total		$181,032,907

Total Savings (from above)	$ 339,343,008
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 29,448,566
Savings to Ratepayers	$ 309,894,443
check	-

Utility **Baltimore Gas and Electric**

Data Source
PSC Case 9494
PSC Item 181
PSC Maillog 227547
Date 11/18/2019

Notes
Tax Rate - State and Federal 27.52%
Pay off Unamortized Debt in 10 Years
Net Operating Costs only from Peak Rewards Riders 15 and 56
Wholesale Revenues assumed to remain consistent

Performance Incentive Incorporated

Amortization of Program Costs

[redacted]

Option 5: Performance-Based Incentive with Longer Term Repayment

Inputs

Residential	$ 52,472,238	$ 48,424,233	$ 121,928,151				$ (1,642,675)	$ 651,689		12,245,506,000	
Commercial											
Adjustment											
Peak Rew 15			$ 79,027,783			$ 36,791,698				incl. above	
Peak Rew 56						$ 2,351,019				incl. above	

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
								Excess Ratepayer Revenues	Hold Constant Opt 4 @ WACC	Annual Savings 2.70%	Hold Constant Opt 4 @ WACC			
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (11) * (12)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9) / (11)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 52,472,238	$ 48,424,233	$ 200,955,934	$ 13,851,587	9.51%	39,142,717	$ (1,642,675)	$ 651,689	$ 100,427,551	12,245,506,000	0.00820118	1000	$ 8.20	$ 98.41
2021	$ 52,472,238	$ 51,329,687	$ 202,098,485	$ 13,930,341	9.51%	39,142,717	$ (1,642,675)	$ (2,774,522)	$ 102,760,070	11,914,877,338	0.00839166	1000	$ 8.39	$ 100.70
2022	$ 52,472,238	$ 56,462,656	$ 198,108,067	$ 13,655,288	9.51%	39,142,717	$ (1,642,675)	$ (5,732,918)	$ 107,617,986	11,593,175,650	0.00878837	1000	$ 8.79	$ 105.46
2023	$ 52,472,238	$ 72,283,045	$ 178,297,261	$ 12,289,759	9.51%	39,142,717	$ (1,642,675)	$ (9,623,330)	$ 122,072,846	11,280,159,907	0.00996879	1000	$ 9.97	$ 119.63
2024	$ 52,472,238	$ 84,565,745	$ 146,203,754	$ 10,077,603	9.51%	39,142,717	$ (1,642,675)	$ (13,703,825)	$ 132,143,389	10,975,595,590	0.01079117	1000	$ 10.79	$ 129.49
2025	$ 52,472,238	$ 84,565,745	$ 114,110,247	$ 7,865,446	9.51%	39,142,717	$ (1,642,675)	$ (16,618,749)	$ 129,931,233	10,679,254,509	0.01061052	1000	$ 10.61	$ 127.33
2026	$ 52,472,238	$ 84,565,745	$ 82,016,740	$ 5,653,289	9.51%	39,142,717	$ (1,642,675)	$ (19,343,153)	$ 127,719,076	10,390,914,637	0.01042987	1000	$ 10.43	$ 125.16
2027	$ 52,472,238	$ 84,565,745	$ 49,923,233	$ 3,441,133	9.51%	39,142,717	$ (1,642,675)	$ (21,883,588)	$ 125,506,919	10,110,359,942	0.01024922	1000	$ 10.25	$ 122.99
2028	$ 52,472,238	$ 84,565,745	$ 17,829,726	$ 1,228,976	9.51%	39,142,717	$ (1,642,675)	$ (24,246,389)	$ 123,294,763	9,837,380,224	0.01006857	1000	$ 10.07	$ 120.82
2029	$ 52,472,238	$ 70,301,964	$ -	$ -	9.51%	39,142,717	$ (1,642,675)	$ (23,537,941)	$ 107,802,006	9,571,770,957	0.00880339	1000	$ 8.80	$ 105.64
2030	$ 52,472,238	$ 52,472,238	$ -	$ -	9.51%	39,142,717	$ (1,642,675)	$ (21,543,763)	$ 89,972,280	9,313,333,142	0.00734737	1000	$ 7.35	$ 88.17
		10-Year Total		$ 68,141,835				$ (159,008,176)						

110% Target	$ (131,414,251)
100% Target	$ (120,150,060)

10-Yr Totals	$ 988,587,512	$ 68,141,835
Modeled Rate of Return		9.51%
Add'l Return via Savings (after tax)		$ 10,000,038
Adjusted Rate of Return		10.91%

Total Savings (from above)	$ 159,008,176
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 13,796,963
Savings to Ratepayers	$ 145,211,214

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Adjusted 10-Year Total $ 78,141,873

ROR capped at 2% above Current WACC/ROR		
Is Adjusted ROR > 2% over WACC		No
If "Yes", Adjusted ROR capped at:		11.51%
Adjusted Util. Return via Svgs.	$	-
Check		9.51%

ROR Cap Adjusted Savings to Utilities (if applic.)		
Total Savings (from above)	$	159,008,176
ROR Cap Triggered?		No
Adj. Savings to Utils (if applic.)	$	-

Application of ROR Cap		
Savings to Utilities (if applicable)	$	13,796,963
Savings to Ratepayers	$	145,211,214

Adjusted Rate of Return	10.91%

Utility **Delmarva Power and Light**

Data Source

PSC Case	9494
PSC Item	175
PSC Maillog	227501
Date	11/15/2019

Notes

Tax Rate - State and Federal 27.52%

Netted out CIF merger contributions for 2018-2020 for projection purposes

Federal Tax Credit ends in 2022

Pay off Unamortized Debt in 10 Years and Continue Program

Net Operating Costs only from Dynamic Pricing and Direct Load Control

Wholesale Revenues assumed to remain consistent

Performance Incentive Incorporated

Amortization of Program Costs

[redacted]

Option 5: Performance-Based Incentive with Longer Term Repayment

Inputs

	(2)	(3)	(4)	(7)	(8)	(9)	(10)	(12)
Residential	$ 7,808,179	$ 9,836,197	$ 26,497,654		$ (899,335)	$ (322,763)	$ 186,971	2153135435
C&I								
DP - Resid				$ 1,200,000		$ (931,241)	$ (448,351)	incl. above
DL - Resid	$ 1,355,985	$ 1,490,433	$ 7,237,585	$ 2,484,529	$ (293,713)	$ (1,501,728)	$ (300,663)	incl. above
DL - C&I								

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
									Excess Ratepayer Revenues	Hold Constant Opt 4 @ WACC	Annual Savings 2.70%	Hold Constant Opt 4 @ WACC			
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (12) * (13)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (12)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 9,164,164	$ 11,326,630	$ 33,735,239	$ 2,094,958	8.57%	$ 3,684,529	$ (1,193,048)	$ (2,755,732)	$ (562,043)	$ 12,595,294	2,153,135,435	0.00584975	1000	$ 5.85	$ 70.20
2021	$ 9,164,164	$ 12,006,228	$ 30,893,175	$ 1,918,466	8.57%	$ 3,684,529	$ (1,193,048)	$ (2,755,732)	$ (368,832)	$ 13,660,443	2,095,000,778	0.00634444	1000	$ 6.34	$ 76.13
2022	$ 9,164,164	$ 13,206,851	$ 26,850,489	$ 1,667,415	8.57%	$ 3,684,529	$ (1,193,048)	$ (2,755,732)	$ (778,290)	$ 14,610,015	2,038,435,757	0.00678546	1000	$ 6.79	$ 81.43
2023	$ 9,164,164	$ 11,849,213	$ 24,165,440	$ 1,500,674	8.57%	$ 3,684,529		$ (2,755,732)	$ (1,125,627)	$ 14,278,684	1,983,397,992	0.00663158	1000	$ 6.63	$ 79.58
2024	$ 9,164,164	$ 13,513,943	$ 19,815,661	$ 1,230,553	8.57%	$ 3,684,529		$ (2,755,732)	$ (1,625,386)	$ 15,673,293	1,929,846,246	0.00727929	1000	$ 7.28	$ 87.35
2025	$ 9,164,164	$ 13,513,943	$ 15,465,881	$ 960,431	8.57%	$ 3,684,529		$ (2,755,732)	$ (1,970,130)	$ 15,403,171	1,877,740,397	0.00715383	1000	$ 7.15	$ 85.85
2026	$ 9,164,164	$ 13,513,943	$ 11,116,102	$ 690,310	8.57%	$ 3,684,529		$ (2,755,732)	$ (2,291,912)	$ 15,133,050	1,827,041,407	0.00702838	1000	$ 7.03	$ 84.34
2027	$ 9,164,164	$ 13,513,943	$ 6,766,323	$ 420,189	8.57%	$ 3,684,529		$ (2,755,732)	$ (2,591,524)	$ 14,862,929	1,777,711,289	0.00690292	1000	$ 6.90	$ 82.84
2028	$ 9,164,164	$ 13,513,943	$ 2,416,544	$ 150,067	8.57%	$ 3,684,529		$ (2,755,732)	$ (2,869,732)	$ 14,592,808	1,729,713,084	0.00677747	1000	$ 6.78	$ 81.33
2029	$ 9,164,164	$ 11,580,708	$ -	$ -	8.57%	$ 3,684,529		$ (2,755,732)	$ (2,731,378)	$ 12,509,505	1,683,010,831	0.00580990	1000	$ 5.81	$ 69.72
2030	$ 9,164,164	$ 9,164,164	$ -	$ -	8.57%	$ 3,684,529		$ (2,755,732)	$ (2,416,748)	$ 10,092,961	1,637,569,538	0.00468756	1000	$ 4.69	$ 56.25
		10-Year Total		$ 8,538,105					$ (18,769,559)						

110% Target	$ (15,509,862)
100% Target	$ (14,179,528)

10-Yr Totals	$ 137,489,615	$ 8,538,105
Modeled Rate of Return		8.57%
Add'l Return via Savings (after tax)		$ 1,181,314
Adjusted Rate of Return		9.75%

Total Savings (from above)	$ 18,769,559
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 1,629,849
Savings to Ratepayers	$ 17,139,711

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Adjusted 10-Year Total $ 9,719,419

ROR capped at 2% above Current WACC/ROR		
Is Adjusted ROR > 2% over WACC		No
If "Yes", Adjusted ROR capped at:		10.57%
Adjusted Util. Return via Svgs.	$	-
Check		8.57%

ROR Cap Adjusted Savings to Utilities (if applic.)		
Total Savings (from above)	$	18,769,559
ROR Cap Triggered?		No
Adj. Savings to Utils (if applic.)	$	-

Application of ROR Cap		
Savings to Utilities (if applicable)	$	1,629,849
Savings to Ratepayers	$	17,139,711

Adjusted Rate of Return	9.75%

Utility **PEPCO**

Amortization of Program Costs

[redacted]

Data Source

PSC Case	9494
PSC Item	174
PSC Maillog	227502
Date	11/15/2019

Notes

Tax Rate - State and Federal 27.52%
Residential program costs reduced by WGL Billing Coord. amt. ($1,682,363)
Federal Tax Credit ends in 2022
Pay off Unamortized Debt in 10 Years and Continue Program
Net Operating Costs only from Dynamic Pricing and Direct Load Control
Wholesale Revenues assumed to remain consistent

Performance Incentive Incorporated

Option 5: Performance-Based Incentive with Longer Term Repayment

Inputs

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Residential	$ 20,473,677	$ 23,809,883	$ 62,201,419				$ (2,503,714)	$ (887,955)	$ 85,730		5522043269
C&I											
DP - Resid						$ 2,698,445		$ (679,383)	$ (1,526,260)		incl. above
DL - Resid	$ 5,395,101	$ 4,964,191	$ 27,458,161			$ 12,720,912	$ (1,173,503)	$ (3,671,290)	$ (860,145)		incl. above
DL - C&I											

									Excess Ratepayer Revenues	Hold Constant Opt 4 @ WACC	Annual Savings 2.70%	Hold Constant Opt 4 @ WACC			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (12) * (13)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (11)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 25,868,778	$ 28,774,074	$ 89,659,580	$ 6,033,882	9.29%	$ 15,419,357	$ (3,677,217)	$ (5,238,628)	$ (2,300,675)	$ 39,010,793	5,522,043,269	0.00706456	1000	$ 7.06	$ 84.77
2021	$ 25,868,778	$ 30,500,518	$ 85,027,840	$ 5,722,176	9.29%	$ 15,419,357	$ (3,677,217)	$ (5,238,628)	$ (1,153,608)	$ 42,726,207	5,372,948,101	0.00773739	1000	$ 7.74	$ 92.85
2022	$ 25,868,778	$ 33,550,570	$ 77,346,047	$ 5,205,210	9.29%	$ 15,419,357	$ (3,677,217)	$ (5,238,628)	$ (2,411,008)	$ 45,259,292	5,227,878,502	0.00819611	1000	$ 8.20	$ 98.35
2023	$ 25,868,778	$ 33,603,383	$ 69,611,443	$ 4,684,689	9.29%	$ 15,419,357		$ (5,238,628)	$ (3,820,926)	$ 48,468,800	5,086,725,782	0.00877733	1000	$ 8.78	$ 105.33
2024	$ 25,868,778	$ 38,398,838	$ 57,081,383	$ 3,841,445	9.29%	$ 15,419,357		$ (5,238,628)	$ (5,436,279)	$ 52,421,011	4,949,384,186	0.00949305	1000	$ 9.49	$ 113.92
2025	$ 25,868,778	$ 38,398,838	$ 44,551,323	$ 2,998,201	9.29%	$ 15,419,357		$ (5,238,628)	$ (6,597,012)	$ 51,577,767	4,815,750,813	0.00934034	1000	$ 9.34	$ 112.08
2026	$ 25,868,778	$ 38,398,838	$ 32,021,264	$ 2,154,957	9.29%	$ 15,419,357		$ (5,238,628)	$ (7,683,783)	$ 50,734,523	4,685,725,541	0.00918764	1000	$ 9.19	$ 110.25
2027	$ 25,868,778	$ 38,398,838	$ 19,491,204	$ 1,311,713	9.29%	$ 15,419,357		$ (5,238,628)	$ (8,699,123)	$ 49,891,279	4,559,210,952	0.00903493	1000	$ 9.03	$ 108.42
2028	$ 25,868,778	$ 38,398,838	$ 6,961,144	$ 468,469	9.29%	$ 15,419,357		$ (5,238,628)	$ (9,645,485)	$ 49,048,036	4,436,112,256	0.00888223	1000	$ 8.88	$ 106.59
2029	$ 25,868,778	$ 32,829,922	$ -	$ -	9.29%	$ 15,419,357		$ (5,238,628)	$ (9,391,126)	$ 43,010,651	4,316,337,225	0.00778890	1000	$ 7.79	$ 93.47
2030	$ 25,868,778	$ 25,868,778	$ -	$ -	9.29%	$ 15,419,357		$ (5,238,628)	$ (8,632,015)	$ 36,049,507	4,199,796,120	0.00652829	1000	$ 6.53	$ 78.34
		10-Year Total		$ 26,386,858					$ (63,470,363)						

110% Target	$ (52,454,752)
100% Target	$ (47,958,187)

10-Yr Totals	$ 392,091,647	$ 26,386,858
Modeled Rate of Return		9.29%
Add'l Return via Savings (after tax)		$ 3,992,057
Adjusted Rate of Return		10.69%

Total Savings (from above)	$ 63,470,363
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 5,507,805
Savings to Ratepayers	$ 57,962,558

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Adjusted 10-Year Total $ 30,378,916

ROR capped at 2% above Current WACC/ROR		
Is Adjusted ROR > 2% over WACC		No
If "Yes", Adjusted ROR capped at:		11.29%
Adjusted Util. Return via Svgs.	$	-
Check		9.29%

ROR Cap Adjusted Savings to Utilities (if applic.)		
Total Savings (from above)	$	63,470,363
ROR Cap Triggered?		No
Adj. Savings to Utils (if applic.)	$	-

Application of ROR Cap		
Savings to Utilities (if applicable)	$	5,507,805
Savings to Ratepayers	$	57,962,558

Adjusted Rate of Return	10.69%

Utility **Potomac Edison**

[redacted]

Data Source

PSC Case	9494
PSC Item	179
PSC Maillog	227637
Date	11/25/2019

Notes

Tax Rate - State and Federal 27.52%

PEPCO amortizes over 6 years per filings, not 5 years

Pay off Unamortized Debt in 10 Years and Continue Program

No Dynamic Pricing program data in Filing

Wholesale Revenues assumed to remain consistent

Performance Incentive Incorporated

Option 5: Performance-Based Incentive with Longer Term Repayment

Inputs

Residential $ 25,454,331 $ 19,435,856 $ 95,005,356 3320026453

Comm'l

							Excess Ratepayer Revenues	Hold Constant Opt 4 @ WACC	Annual Savings 2.70%	Hold Constant Opt 4 @ WACC			
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**
Year	**Program Cost**	**Amortization**	**Unamortized Balance (Prior UB)+(2)-(3)**	**Return to Utility (4) * (6) * (.7248)**	**Utility WACC / Rate of Return**	**Wholesale Revenue**	**True Up**	**Ratepayer Revenue Requirement (10) * (11)**	**Projected Electricity Sales (kWh)**	**Ratepayer Surcharge (3)+(5)+(7)+(8) / (10)**	**Average kWh/Month per Ratepayer**	**Estimated Monthly Bill Impact per Ratepayer**	**Estimated Annual Bill Impact per Ratepayer**
2020	$ 25,454,331	$ 19,435,856	$ 95,005,356	$ 6,260,853	9.09%			$ 25,696,709	3,320,026,453	0.00773991	1000	$ 7.74	$ 92.88
2021	$ 25,454,331	$ 20,602,007	$ 99,857,680	$ 6,580,621	9.09%		$ (733,931)	$ 27,182,628	3,230,385,739	0.00818747	1000	$ 8.19	$ 98.25
2022	$ 25,454,331	$ 22,662,208	$ 102,649,803	$ 6,764,622	9.09%		$ (1,567,597)	$ 29,426,830	3,143,165,324	0.00886343	1000	$ 8.86	$ 106.36
2023	$ 25,454,331	$ 35,719,311	$ 92,384,822	$ 6,088,160	9.09%		$ (3,295,795)	$ 41,807,471	3,058,299,860	0.01259251	1000	$ 12.59	$ 151.11
2024	$ 25,454,331	$ 42,083,599	$ 75,755,554	$ 4,992,291	9.09%		$ (4,881,968)	$ 47,075,890	2,975,725,764	0.01417937	1000	$ 14.18	$ 170.15
2025	$ 25,454,331	$ 42,083,599	$ 59,126,286	$ 3,896,422	9.09%		$ (5,881,037)	$ 45,980,021	2,895,381,168	0.01384929	1000	$ 13.85	$ 166.19
2026	$ 25,454,331	$ 42,083,599	$ 42,497,018	$ 2,800,554	9.09%		$ (6,797,740)	$ 44,884,153	2,817,205,877	0.01351922	1000	$ 13.52	$ 162.23
2027	$ 25,454,331	$ 42,083,599	$ 25,867,750	$ 1,704,685	9.09%		$ (7,634,995)	$ 43,788,284	2,741,141,318	0.01318914	1000	$ 13.19	$ 158.27
2028	$ 25,454,331	$ 42,083,599	$ 9,238,482	$ 608,816	9.09%		$ (8,395,627)	$ 42,692,415	2,667,130,502	0.01285906	1000	$ 12.86	$ 154.31
2029	$ 25,454,331	$ 34,692,813	$ -	$ -	9.09%		$ (7,574,974)	$ 34,692,813	2,595,117,979	0.01044956	1000	$ 10.45	$ 125.39
2030	$ 25,454,331	$ 25,454,331	$ -	$ -	9.09%		$ (6,095,011)	$ 25,454,331	2,525,049,793	0.00766691	1000	$ 7.67	$ 92.00
		10-Year Total		$ 33,436,170			$ (52,858,675)						

110% Target	$ (43,679,849)
100% Target	$ (39,933,639)

10-Yr Totals	$ 507,377,396	$ 33,436,170	Total Savings (from above)	$ 52,858,675
Modeled Rate of Return		9.09%	Savings Split Triggered?	Yes
Add'l Return via Savings (after ta		$ 3,326,407	Savings to Utilities (if applicable	$ 4,589,413
Adjusted Rate of Return		10.00%	Savings to Ratepayers	$ 48,269,262

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Adjusted 10-Year Total $ 36,762,577

ROR capped at 2% above Current WACC/ROR		
Is Adjusted ROR > 2% over WACC		No
If "Yes", Adjusted ROR capped at		11.09%
Adjusted Util. Return via Svgs.	$	-
Check		9.09%

ROR Cap Adjusted Savings to Utilities (if applic.)		
Total Savings (from above)	$	52,858,675
ROR Cap Triggered?		No
Adj. Savings to Utils (if applic.)	$	-

Application of ROR Cap		
Savings to Utilities (if applicable)	$	4,589,413
Savings to Ratepayers	$	48,269,262

Adjusted Rate of Return	10.00%

Utility **SMECO**

<u>Data Source</u>
PSC Case 9494
PSC Item 177
PSC Maillog 227606
Date 11/22/2019

<u>Notes</u>
Tax Rate - State and Federal 0.00%
Unamortized Balance not available in filings; extrapolated from 4/19 CRWG report
Pay off Unamortized Debt in 10 Years and Continue Program
Net Operating Costs only from Cool Sentry programs
Wholesale Revenues assumed to remain consistent

Performance Incentive Incorporated

Amortization of Program Costs

[redacted]

Option 5: Performance-Based Incentive with Longer Term Repayment

<u>Inputs</u>

Residential	$ 14,007,234	$ 12,588,847	$ 35,386,698					$ 183,932		2212848756	
Comm'l											
Cool Sent- Res						$ 6,065,334		$ (606,603)			
Cool Sent - CI											

								Excess Ratepayer Revenues	Hold Constant Opt 4 @ WACC	Annual Savings 2.70%	Hold Constant Opt 4 @ WACC			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (11) * (12)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9) / (10)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 14,007,234	$ 12,588,847	$ 35,386,698	$ 2,165,666	6.12%	$ 6,065,334		$ (422,671)	$ 14,331,842	2,212,848,756	0.00647665	1000	$ 6.48	$ 77.72
2021	$ 14,007,234	$ 13,344,178	$ 36,049,754	$ 2,206,245	6.12%	$ 6,065,334		$ (419,861)	$ 15,550,423	2,153,101,840	0.00702733	1000	$ 7.03	$ 84.33
2022	$ 14,007,234	$ 14,678,596	$ 35,378,393	$ 2,165,158	6.12%	$ 6,065,334		$ (897,284)	$ 16,843,753	2,094,968,090	0.00761180	1000	$ 7.61	$ 91.34
2023	$ 14,007,234	$ 17,545,073	$ 31,840,553	$ 1,948,642	6.12%	$ 6,065,334		$ (1,536,742)	$ 19,493,715	2,038,403,951	0.00880933	1000	$ 8.81	$ 105.71
2024	$ 14,007,234	$ 19,738,534	$ 26,109,254	$ 1,597,886	6.12%	$ 6,065,334		$ (2,212,676)	$ 21,336,420	1,983,367,045	0.00964206	1000	$ 9.64	$ 115.70
2025	$ 14,007,234	$ 19,738,534	$ 20,377,954	$ 1,247,131	6.12%	$ 6,065,334		$ (2,684,154)	$ 20,985,664	1,929,816,135	0.00948355	1000	$ 9.48	$ 113.80
2026	$ 14,007,234	$ 19,738,534	$ 14,646,655	$ 896,375	6.12%	$ 6,065,334		$ (3,125,173)	$ 20,634,909	1,877,711,099	0.00932504	1000	$ 9.33	$ 111.90
2027	$ 14,007,234	$ 19,738,534	$ 8,915,355	$ 545,620	6.12%	$ 6,065,334		$ (3,536,777)	$ 20,284,153	1,827,012,899	0.00916653	1000	$ 9.17	$ 110.00
2028	$ 14,007,234	$ 19,738,534	$ 3,184,055	$ 194,864	6.12%	$ 6,065,334		$ (3,919,979)	$ 19,933,398	1,777,683,551	0.00900803	1000	$ 9.01	$ 108.10
2029	$ 14,007,234	$ 17,191,289	$ -	$ -	6.12%	$ 6,065,334		$ (3,753,618)	$ 17,191,289	1,729,686,095	0.00776885	1000	$ 7.77	$ 93.23
2030	$ 14,007,234	$ 14,007,234	$ -	$ -	6.12%	$ 6,065,334		$ (3,354,017)	$ 14,007,234	1,682,984,571	0.00632996	1000	$ 6.33	$ 75.96
		10-Year Total		$ 10,801,921				$ (25,440,282)						

110% Target	$ (21,025,149)
100% Target	$ (19,222,867)

10-Yr Totals	$ 176,501,973	$ 10,801,921
Modeled Rate of Return		6.12%
Add'l Return via Savings (after ta		$ 2,207,567
Adjusted Rate of Return		7.37%

Total Savings (from above)	$ 25,440,282
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 2,207,567
Savings to Ratepayers	$ 23,232,715

<u>If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap</u>

Adjusted 10-Year Total $ 13,009,487

ROR capped at 2% above Current WACC/ROR		
Is Adjusted ROR > 2% over WACC		No
If "Yes", Adjusted ROR capped at		8.12%
Adjusted Util. Return via Svgs.	$	-
Check		6.12%

ROR Cap Adjusted Savings to Utilities (if applic.)		
Total Savings (from above)	$	25,440,282
ROR Cap Triggered?		No
Adj. Savings to Utils (if applic.)	$	-

Application of ROR Cap		
Savings to Utilities (if applicable)	$	2,207,567
Savings to Ratepayers	$	23,232,715

Adjusted Rate of Return	7.37%

Utility **Washington Gas Light**

Data Source
PSC Case 9494
PSC Item 171
PSC Maillog 227417
Date 11/18/2019

Notes
Tax Rate - State and Federal 27.52%
Pay off Unamortized Debt in 10 Years and Continue Program
No Dynamic Pricing program data in Filing
Wholesale Revenues assumed to remain consistent
Monthly therm estimate based on total Res and C&I accounts (492,943)

Performance Incentive Incorporated

Amortization of Program Costs

[redacted]

Option 5: Performance-Based Incentive with Longer Term Repayment

Inputs

Residential	9943800	4150254	$ 26,113,516	376,656,000
Commercial				

(1) Year	(2) Program Cost	(3) Amortization	(4) Unamortized Balance (Prior UB)+(2)-(3)	(5) Return to Utility (4) * (6) * (.7248)	(6) Utility WACC / Rate of Return	(7) Wholesale Revenue	(8) Excess Ratepayer Revenues — True Up	(9) Hold Constant Opt 4 @ WACC — Ratepayer Revenue Requirement (10) * (11)	(10) Annual Savings 2.70% — Projected Gas Sales (Therms)	(11) Hold Constant to Scenario 4b — Ratepayer Surcharge (3)+(5)+(7)+(8) / (10)	(12) Average Therm/Month per Ratepayer	(13) Estimated Monthly Bill Impact per Ratepayer	(14) Estimated Annual Bill Impact per Ratepayer
2020	$ 9,943,800	$ 4,150,254	$ 26,113,516	$ 1,820,785	9.62%			$ 5,971,039	376,656,000	0.01585276	64	$ 1.01	$ 12.11
2021	$ 9,943,800	$ 4,399,269	$ 31,658,047	$ 2,207,381	9.62%		$ (178,380)	$ 6,606,651	366,486,288	0.01754028	64	$ 1.12	$ 13.40
2022	$ 9,943,800	$ 4,839,196	$ 36,762,651	$ 2,563,304	9.62%		$ (394,339)	$ 7,402,500	356,591,158	0.01965321	64	$ 1.25	$ 15.02
2023	$ 9,943,800	$ 13,620,065	$ 33,086,386	$ 2,306,973	9.62%		$ (1,255,571)	$ 15,927,038	346,963,197	0.04228537	64	$ 2.69	$ 32.31
2024	$ 9,943,800	$ 15,899,349	$ 27,130,836	$ 1,891,718	9.62%		$ (1,845,008)	$ 17,791,068	337,595,191	0.04723426	64	$ 3.01	$ 36.09
2025	$ 9,943,800	$ 15,899,349	$ 21,175,287	$ 1,476,463	9.62%		$ (2,222,439)	$ 17,375,812	328,480,120	0.04613178	64	$ 2.94	$ 35.25
2026	$ 9,943,800	$ 15,899,349	$ 15,219,737	$ 1,061,208	9.62%		$ (2,568,690)	$ 16,960,557	319,611,157	0.04502930	64	$ 2.87	$ 34.41
2027	$ 9,943,800	$ 15,899,349	$ 9,264,188	$ 645,953	9.62%		$ (2,884,865)	$ 16,545,302	310,981,656	0.04392682	64	$ 2.80	$ 33.56
2028	$ 9,943,800	$ 15,899,349	$ 3,308,639	$ 230,697	9.62%		$ (3,172,036)	$ 16,130,047	302,585,151	0.04282435	64	$ 2.73	$ 32.72
2029	$ 9,943,800	$ 13,252,439	$ -	$ -	9.62%		$ (2,893,593)	$ 13,252,439	294,415,352	0.03518446	64	$ 2.24	$ 26.88
2030	$ 9,943,800	$ 9,943,800	$ -	$ -	9.62%		$ (2,381,032)	$ 9,943,800	286,466,138	0.02640022	64	$ 1.68	$ 20.17
		10-Year Total		$ 12,383,697			$ (19,795,952)					$ (14,663,668.32)	

110% Target	$ (16,362,014)
100% Target	$ (14,960,035)

10-Yr Totals	$ 177,605,770	$ 12,383,697	Total Savings (from above)	$ 19,795,952
Modeled Rate of Return		9.62%	Savings Split Triggered?	Yes
Add'l Return via Savings (after ta		$ 1,244,459	Savings to Utilities (if applicable	$ 1,716,969
Adjusted Rate of Return		10.59%	Savings to Ratepayers	$ 18,078,983

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Adjusted 10-Year Total $ 13,628,157

ROR capped at 2% above Current WACC/ROR		
Is Adjusted ROR > 2% over WACC		No
If "Yes", Adjusted ROR capped at		11.62%
Adjusted Util. Return via Svgs.	$	-
Check		9.62%

ROR Cap Adjusted Savings to Utilities (if applic.)		
Total Savings (from above)	$	19,795,952
ROR Cap Triggered?		No
Adj. Savings to Utils (if applic.)	$	-

Application of ROR Cap		
Savings to Utilities (if applicable)	$	1,716,969
Savings to Ratepayers	$	18,078,983

Adjusted Rate of Return	10.59%

Performance-Based Option 5b

Commercial Sector Analysis

All EmPower Utilities - CI Only

Utility Financial Data - PSC Filings - Case 9494

PSC Item	PSC Maillog	Utility	Date
171	227417	WG&L	11/18/2019
174	227502	PEPCO	11/15/2019
175	227501	DP&L	11/15/2019
177	227606	SMECO	11/22/2019
179	227637	Potomac Ed	11/25/2019
181	227547	BGE	11/18/2019

Performance-Based Incentive Model

Utility	Current WACC/ROR	Baseline WACC/ROR at <90% of Goal (<1.8% reduction)	Baseline WACC/ROR at >=90% of Goal (>=1.8% reduction)	Adjusted ROR After Split of Savings (if applic.)	ROR Cap Triggered?
WG&L	9.62%	8.62%	9.62%	10.42%	No
PEPCO	9.29%	8.29%	9.29%	10.65%	No
DPL	8.57%	7.57%	8.57%	9.97%	No
SMECO	6.12%	5.12%	6.12%	7.45%	No
Potomac Ed	9.09%	8.09%	9.09%	10.11%	No
BGE	9.51%	8.51%	9.51%	10.93%	No
Overall	9.25%	9.19%	9.25%	10.50%	

Assumptions		
EmPOWER Goal for Annual Utility Sales Reduction	2.00%	fixed
Scenario Percentage Utility Sales Reduction	2.70%	input
(Note: do not enter zero)		
Savings Split Triggered for Exceeding Goal by:	110%	fixed
Savings Split Triggered by this Scenario?	Yes	formula

Note: ROR capped at 2% above Current WACC/ROR

Note Regarding Amortization of Program Costs
Amortization (Column 3) is increased during 2021-2024 timeframe to new baseline that is approx. 50% above annual Program Costs (Column 2) to achieve accelerated paydown of Unamortized Balance (Column 4)

Option 5b: Performance-Based Incentive with Longer Term Repayment

(1) Year	(2) Program Cost	(3) Amortization	(4) Unamortized Balance (Prior)+(2)-(3)	(5) Return to Utility (4)*(6)*(.7248)	(6) Imputed Utility Rate of Return	(7) Net Operating Costs (Current Year Expense)	(8) Federal Tax Credit	(9) Wholesale Revenue	(10) Excess Ratepayer Revenues True Up	(11) Hold Constant Opt 4 @ WACC Ratepayer Revenue Requirement	(12) Estimated Monthly Bill Impact per Ratepayer	(13) Estimated Annual Bill Impact per Ratepayer
2020	$ 164,207,683	$ 119,809,585	$ 341,551,333	$ 22,888,720	9.25%	$ 6,012,536	$ (5,257,534)	$ (1,592,494)	$ (6,036,485)	$ 133,305,173	$ 3.54	$ 42.42
2021	$ 164,207,683	$ 126,998,160	$ 378,760,855	$ 25,305,659	9.22%	$ 6,012,536	$ (5,257,534)	$ (1,592,494)	$ (4,021,574)	$ 148,947,172	$ 3.95	$ 47.40
2022	$ 164,207,683	$ 139,697,976	$ 403,270,562	$ 26,869,306	9.19%	$ 6,012,536	$ (5,257,534)	$ (1,592,494)	$ (8,694,394)	$ 163,210,635	$ 4.33	$ 51.94
2023	$ 164,207,683	$ 204,534,739	$ 362,943,506	$ 24,182,376	9.19%	$ 6,012,536	$ -	$ (1,592,494)	$ (18,180,236)	$ 230,618,002	$ 6.12	$ 73.39
2024	$ 164,207,683	$ 229,537,514	$ 297,613,675	$ 19,829,548	9.19%	$ 6,012,536	$ -	$ (1,592,494)	$ (26,057,542)	$ 251,267,949	$ 6.66	$ 79.96
2025	$ 164,207,683	$ 229,537,514	$ 232,283,844	$ 15,476,720	9.19%	$ 6,012,536	$ -	$ (1,592,494)	$ (31,581,478)	$ 246,915,121	$ 6.55	$ 78.58
2026	$ 164,207,683	$ 229,537,514	$ 166,954,013	$ 11,123,893	9.19%	$ 6,012,536	$ -	$ (1,592,494)	$ (36,736,247)	$ 242,562,294	$ 6.43	$ 77.19
2027	$ 164,207,683	$ 229,537,514	$ 101,624,182	$ 6,771,065	9.19%	$ 6,012,536	$ -	$ (1,592,494)	$ (41,534,584)	$ 238,209,466	$ 6.32	$ 75.80
2028	$ 164,207,683	$ 229,537,514	$ 36,294,351	$ 2,418,238	9.19%	$ 6,012,536	$ -	$ (1,592,494)	$ (45,988,806)	$ 233,856,639	$ 6.20	$ 74.42
2029	$ 164,207,683	$ 200,502,034	$ -	$ -	9.19%	$ 6,012,536	$ -	$ (1,592,494)	$ (44,193,501)	$ 202,402,921	$ 5.37	$ 64.41
2030	$ 164,207,683	$ 164,207,683	$ -	$ -	9.19%	$ 6,012,536	$ -	$ (1,592,494)	$ (39,774,513)	$ 166,108,570	$ 4.41	$ 52.86
		10-Year Total		$131,976,804					$ (296,762,875)	$ 2,124,098,769	$ 5.44	

Savings Applied to Ratepayers 91.33%

Ratepayer Revenue Requirement	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
$ 315,335,060	$ 4.99	$ 59.91
$ 145,274,369	$ 3.85	$ 46.23
$ 155,270,261	$ 4.12	$ 49.41
$ 214,014,444	$ 5.68	$ 68.11
$ 227,470,243	$ 6.03	$ 72.39
$ 218,072,541	$ 5.78	$ 69.40
$ 209,011,991	$ 5.54	$ 66.51
$ 200,276,961	$ 5.31	$ 63.73
$ 191,856,203	$ 5.09	$ 61.05
$ 162,042,093	$ 4.30	$ 51.57
$ 129,783,494	$ 3.44	$ 41.30
$ 1,853,072,600	$ 4.92	
(0.00) check		

10-Yr Totals	$ 1,979,744,988	$ 131,976,804
Modeled Rate of Return		9.20%
Add'l Return via Svgs (aft.tax)		$ 18,653,964
Adjusted Rate of Return		10.50%

Adjusted 10-Year Total $150,630,768

Total Savings (from above)	$ 296,762,875
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 25,736,706
Savings to Ratepayers	$ 271,026,169
check	-

110% Target	$(245,289,463)

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Application of ROR cap at 2% above Current WACC/ROR by Utility

10-Yr Totals	$ 1,979,744,988	$ 131,976,804
Modeled Rate of Return		9.20%
Add'l Return via Svgs (aft.tax)		$ 18,653,964
Adjusted Rate of Return		10.50%

Total Savings (from above)	$ 296,762,875
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 25,736,706
Savings to Ratepayers	$ 271,026,169
check	-

Adjusted 10-Year Total $150,630,768

Utility **Baltimore Gas and Electric**

Data Source
PSC Case 9494
PSC Item 181
PSC Maillog 227547
Date 11/18/2019

Notes
Tax Rate - State and Federal 27.52%
Pay off Unamortized Debt in 10 Years
Net Operating Costs only from Peak Rewards Riders 15 and 56
Wholesale Revenues assumed to remain consistent

Performance Incentive Incorporated

Amortization of Program Costs

[redacted]

Option 5: Performance-Based Incentive with Longer Term Repayment

Inputs

	(2)	(3)	(4)	(5)	(7)	(8)	(9)	(11)
Residential								
Commercial	$ 55,158,263	$ 52,231,207	$ 128,973,493	$ 4,906,441		$ (439,391)	$ (2,677,807)	16,399,051,000
Adjustment		$ 706,586						
Peak Rew 15								
Peak Rew 56					$ 2,151,270			incl. above

								Excess Ratepayer Revenues	Hold Constant Opt 4 @ WACC	Annual Savings 2.70%	Hold Constant Opt 4 @ WACC			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (11) * (12)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9) / (11)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 55,158,263	$ 52,937,793	$ 128,973,493	$ 8,889,947	9.51%	2,151,270	$ (439,391)	$ (2,677,807)	$ 60,861,812	16,399,051,000	0.00371130	1000	$ 3.71	$ 44.54
2021	$ 55,158,263	$ 56,114,061	$ 128,017,695	$ 8,824,065	9.51%	2,151,270	$ (439,391)	$ (1,799,550)	$ 66,650,005	15,956,276,623	0.00406426	1000	$ 4.06	$ 48.77
2022	$ 55,158,263	$ 61,725,467	$ 121,450,492	$ 8,371,398	9.51%	2,151,270	$ (439,391)	$ (3,825,324)	$ 71,808,743	15,525,457,154	0.00437884	1000	$ 4.38	$ 52.55
2023	$ 55,158,263	$ 67,303,312	$ 109,305,443	$ 7,534,258	9.51%	2,151,270	$ (439,391)	$ (6,034,598)	$ 76,549,449	15,106,269,811	0.00466792	1000	$ 4.67	$ 56.02
2024	$ 55,158,263	$ 74,833,243	$ 89,630,463	$ 6,178,092	9.51%	2,151,270	$ (439,391)	$ (8,578,745)	$ 82,723,213	14,698,400,526	0.00504439	1000	$ 5.04	$ 60.53
2025	$ 55,158,263	$ 74,833,243	$ 69,955,483	$ 4,821,925	9.51%	2,151,270	$ (439,391)	$ (10,407,186)	$ 81,367,047	14,301,543,712	0.00496169	1000	$ 4.96	$ 59.54
2026	$ 55,158,263	$ 74,833,243	$ 50,280,504	$ 3,465,759	9.51%	2,151,270	$ (439,391)	$ (12,117,710)	$ 80,010,880	13,915,402,032	0.00487899	1000	$ 4.88	$ 58.55
2027	$ 55,158,263	$ 74,833,243	$ 30,605,524	$ 2,109,592	9.51%	2,151,270	$ (439,391)	$ (13,714,362)	$ 78,654,714	13,539,686,177	0.00479630	1000	$ 4.80	$ 57.56
2028	$ 55,158,263	$ 74,833,243	$ 10,930,544	$ 753,426	9.51%	2,151,270	$ (439,391)	$ (15,201,056)	$ 77,298,547	13,174,114,650	0.00471360	1000	$ 4.71	$ 56.56
2029	$ 55,158,263	$ 66,088,807	$ -	$ -	9.51%	2,151,270	$ (439,391)	$ (14,803,886)	$ 67,800,686	12,818,413,555	0.00413443	1000	$ 4.13	$ 49.61
2030	$ 55,158,263	$ 55,158,263	$ -	$ -	9.51%	2,151,270	$ (439,391)	$ (13,617,493)	$ 56,870,142	12,472,316,389	0.00346789	1000	$ 3.47	$ 41.61
		10-Year Total		$ 42,058,514				$ (100,099,909)						

110% Target	$	(82,726,922)
100% Target	$	(75,635,296)

10-Yr Totals	$ 610,176,148	$ 42,058,514
Modeled Rate of Return		9.51%
Add'l Return via Savings (after tax)		$ 6,295,970
Adjusted Rate of Return		10.93%

Total Savings (from above)	$ 100,099,909
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 8,686,493
Savings to Ratepayers	$ 91,413,416

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Adjusted 10-Year Total $ 48,354,485

ROR capped at 2% above Current WACC/ROR		
Is Adjusted ROR > 2% over WACC		No
If "Yes", Adjusted ROR capped at:		11.51%
Adjusted Util. Return via Svgs.	$	-
Check		9.51%

ROR Cap Adjusted Savings to Utilities (if applic.)		
Total Savings (from above)	$	100,099,909
ROR Cap Triggered?		No
Adj. Savings to Utils (if applic.)	$	-

Application of ROR Cap		
Savings to Utilities (if applicable)	$	8,686,493
Savings to Ratepayers	$	91,413,416

Adjusted Rate of Return	10.93%

Utility **Delmarva Power and Light**

Data Source
PSC Case 9494
PSC Item 175
PSC Maillog 227501
Date 11/15/2019

Notes
Tax Rate - State and Federal 27.52%
Netted out CIF merger contributions for 2018-2020 for projection purposes
Federal Tax Credit ends in 2022
Pay off Unamortized Debt in 10 Years and Continue Program
Net Operating Costs only from Dynamic Pricing and Direct Load Control
Wholesale Revenues assumed to remain consistent

Performance Incentive Incorporated

Amortization of Program Costs

[redacted]

Option 5: Performance-Based Incentive with Longer Term Repayment

Inputs															
Residential															
C&I	$ 18,201,871	$ 8,720,286	$ 23,361,655				$ (1,097,687)	$ (339,994)	$ (137,938)		1929641791				
DP - Resid															
DL - Resid															
DL - C&I	$ 121,491	$ 126,842	$ 730,112			$ 435,491	$ (21,664)	$ -	$ (35,674)		incl. above				
									Excess Ratepayer Revenues	Hold Constant Opt 4 @ WACC	Annual Savings 2.70%	Hold Constant Opt 4 @ WACC			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (12) * (13)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (12)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 18,323,362	$ 8,847,128	$ 24,091,767	$ 1,496,099	8.57%	$ 435,491	$ (1,119,351)	$ (339,994)	$ (173,612)	$ 9,145,761	1,929,641,791	0.00473962	1000	$ 4.74	$ 56.88
2021	$ 18,323,362	$ 9,377,956	$ 33,037,173	$ 2,051,608	8.57%	$ 435,491	$ (1,119,351)	$ (339,994)	$ (280,954)	$ 10,405,710	1,877,541,463	0.00539256	1000	$ 5.39	$ 64.71
2022	$ 18,323,362	$ 10,315,751	$ 41,044,784	$ 2,548,881	8.57%	$ 435,491	$ (1,119,351)	$ (339,994)	$ (630,770)	$ 11,840,778	1,826,847,843	0.00613626	1000	$ 6.14	$ 73.64
2023	$ 18,323,362	$ 22,427,840	$ 36,940,306	$ 2,293,993	8.57%	$ 435,491		$ (339,994)	$ (1,956,417)	$ 24,817,330	1,777,522,951	0.01286111	1000	$ 12.86	$ 154.33
2024	$ 18,323,362	$ 24,972,617	$ 30,291,051	$ 1,881,074	8.57%	$ 435,491		$ (339,994)	$ (2,794,744)	$ 26,949,188	1,729,529,832	0.01396590	1000	$ 13.97	$ 167.59
2025	$ 18,323,362	$ 24,972,617	$ 23,641,796	$ 1,468,156	8.57%	$ 435,491		$ (339,994)	$ (3,394,100)	$ 26,536,270	1,682,832,526	0.01375191	1000	$ 13.75	$ 165.02
2026	$ 18,323,362	$ 24,972,617	$ 16,992,541	$ 1,055,237	8.57%	$ 435,491		$ (339,994)	$ (3,956,402)	$ 26,123,351	1,637,396,048	0.01353793	1000	$ 13.54	$ 162.46
2027	$ 18,323,362	$ 24,972,617	$ 10,343,286	$ 642,318	8.57%	$ 435,491		$ (339,994)	$ (4,482,912)	$ 25,710,432	1,593,186,355	0.01332394	1000	$ 13.32	$ 159.89
2028	$ 18,323,362	$ 24,972,617	$ 3,694,031	$ 229,399	8.57%	$ 435,491		$ (339,994)	$ (4,974,853)	$ 25,297,513	1,550,170,323	0.01310995	1000	$ 13.11	$ 157.32
2029	$ 18,323,362	$ 22,017,393	$ -	$ -	8.57%	$ 435,491		$ (339,994)	$ (4,828,221)	$ 22,112,890	1,508,315,724	0.01145958	1000	$ 11.46	$ 137.51
2030	$ 18,323,362	$ 18,323,362	$ -	$ -	8.57%	$ 435,491		$ (339,994)	$ (4,410,375)	$ 18,418,859	1,467,591,200	0.00954522	1000	$ 9.55	$ 114.54
		10-Year Total		$ 12,170,666					$ (31,709,748)						

110% Target	$ (26,215,722)
100% Target	$ (23,971,846)

10-Yr Totals	$ 195,984,966	$ 12,170,666
Modeled Rate of Return		8.57%
Add'l Return via Savings (after tax)		$ 1,991,035
Adjusted Rate of Return		9.97%

Total Savings (from above)	$ 31,709,748
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 2,747,013
Savings to Ratepayers	$ 28,962,735

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Adjusted 10-Year Total $ 14,161,701

ROR capped at 2% above Current WACC/ROR		
Is Adjusted ROR > 2% over WACC		No
If "Yes", Adjusted ROR capped at:		10.57%
Adjusted Util. Return via Svgs.	$	-
Check		8.57%

ROR Cap Adjusted Savings to Utilities (if applic.)		
Total Savings (from above)	$	31,709,748
ROR Cap Triggered?		No
Adj. Savings to Utils (if applic.)	$	-

Application of ROR Cap		
Savings to Utilities (if applicable)	$	2,747,013
Savings to Ratepayers	$	28,962,735

Adjusted Rate of Return	9.97%

Utility **PEPCO**

Amortization of Program Costs

[redacted]

Data Source

PSC Case	9494
PSC Item	174
PSC Maillog	227502
Date	11/15/2019

Notes

Tax Rate - State and Federal 27.52%

Residential program costs reduced by WGL Billing Coord. amt. ($1,682,363)

Federal Tax Credit ends in 2022

Pay off Unamortized Debt in 10 Years and Continue Program

Net Operating Costs only from Dynamic Pricing and Direct Load Control

Wholesale Revenues assumed to remain consistent

Performance Incentive Incorporated

Option 5: Performance-Based Incentive with Longer Term Repayment

Inputs

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Residential												
C&I	$ 52,795,832	$ 38,988,961	$ 100,044,277				$ (4,066,432)	$ (813,109)	$ (3,499,098)		8531609067	
DP - Resid												
DL - Resid												
DL - C&I	$ 441,832	$ 224,698	$ 1,872,126			$ 906,620	$ (71,751)		$ (40,359)		incl. above	
									Excess Ratepayer Revenues	Hold Constant Opt 4 @ WACC	Annual Savings 2.70%	Hold Constant Opt 4 @ WACC

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Federal Tax Credit	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (12) * (13)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9)+(10) / (11)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 53,237,664	$ 39,213,659	$ 101,916,403	$ 6,858,737	9.29%	$ 906,620	$ (4,138,183)	$ (813,109)	$ (3,539,457)	$ 38,488,267	8,531,609,067	0.00451126	1000	$ 4.51	$ 54.14
2021	$ 53,237,664	$ 41,566,479	$ 113,587,588	$ 7,644,181	9.29%	$ 906,620	$ (4,138,183)	$ (813,109)	$ (1,219,482)	$ 45,165,988	8,301,255,622	0.00529396	1000	$ 5.29	$ 63.53
2022	$ 53,237,664	$ 45,723,126	$ 121,102,126	$ 8,149,892	9.29%	$ 906,620	$ (4,138,183)	$ (813,109)	$ (2,654,406)	$ 49,828,347	8,077,121,720	0.00584044	1000	$ 5.84	$ 70.09
2023	$ 53,237,664	$ 65,347,877	$ 108,991,913	$ 7,334,903	9.29%	$ 906,620		$ (813,109)	$ (5,737,150)	$ 72,776,291	7,859,039,434	0.00853020	1000	$ 8.53	$ 102.36
2024	$ 53,237,664	$ 72,856,208	$ 89,373,369	$ 6,014,620	9.29%	$ 906,620		$ (813,109)	$ (8,188,934)	$ 78,964,340	7,646,845,369	0.00925550	1000	$ 9.26	$ 111.07
2025	$ 53,237,664	$ 72,856,208	$ 69,754,825	$ 4,694,338	9.29%	$ 906,620		$ (813,109)	$ (9,931,000)	$ 77,644,057	7,440,380,544	0.00910075	1000	$ 9.10	$ 109.21
2026	$ 53,237,664	$ 72,856,208	$ 50,136,280	$ 3,374,055	9.29%	$ 906,620		$ (813,109)	$ (11,559,295)	$ 76,323,775	7,239,490,270	0.00894600	1000	$ 8.95	$ 107.35
2027	$ 53,237,664	$ 72,856,208	$ 30,517,736	$ 2,053,773	9.29%	$ 906,620		$ (813,109)	$ (13,077,729)	$ 75,003,492	7,044,024,032	0.00879125	1000	$ 8.79	$ 105.49
2028	$ 53,237,664	$ 72,856,208	$ 10,899,191	$ 733,490	9.29%	$ 906,620		$ (813,109)	$ (14,490,086)	$ 73,683,210	6,853,835,383	0.00863650	1000	$ 8.64	$ 103.64
2029	$ 53,237,664	$ 64,136,855	$ -	$ -	9.29%	$ 906,620		$ (813,109)	$ (14,024,327)	$ 64,230,366	6,668,781,828	0.00752852	1000	$ 7.53	$ 90.34
2030	$ 53,237,664	$ 53,237,664	$ -	$ -	9.29%	$ 906,620		$ (813,109)	$ (12,770,091)	$ 53,331,175	6,488,724,719	0.00625101	1000	$ 6.25	$ 75.01
		10-Year Total		$ 39,999,253					$ (93,652,499)						

110% Target	$ (77,411,996)
100% Target	$ (70,780,886)

10-Yr Totals	$ 594,363,029	$ 39,999,253
Modeled Rate of Return		9.29%
Add'l Return via Savings (after tax)		$ 5,885,558
Adjusted Rate of Return		10.65%

Total Savings (from above)	$ 93,652,499
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 8,120,252
Savings to Ratepayers	$ 85,532,248

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Adjusted 10-Year Total $ 45,884,811

ROR capped at 2% above Current WACC/ROR		
Is Adjusted ROR > 2% over WACC		No
If "Yes", Adjusted ROR capped at:		11.29%
Adjusted Util. Return via Svgs.	$	-
Check		9.29%

ROR Cap Adjusted Savings to Utilities (if applic.)		
Total Savings (from above)	$	93,652,499
ROR Cap Triggered?		No
Adj. Savings to Utils (if applic.)	$	-

Application of ROR Cap		
Savings to Utilities (if applicable)	$	8,120,252
Savings to Ratepayers	$	85,532,248

Adjusted Rate of Return	10.65%

Utility **Potomac Edison**

[redacted]

Data Source

PSC Case	9494
PSC Item	179
PSC Maillog	227637
Date	11/25/2019

Notes

Tax Rate - State and Federal 27.52%
PEPCO amortizes over 6 years per filings, not 5 years
Pay off Unamortized Debt in 10 Years and Continue Program
No Dynamic Pricing program data in Filing
Wholesale Revenues assumed to remain consistent

Performance Incentive Incorporated

Option 5: Performance-Based Incentive with Longer Term Repayment

Inputs
Residential
Comm'l $ 25,551,316 $ 11,509,452 $ 62,125,839

							Excess Ratepayer Revenues	Hold Constant Opt 4 @ WACC	Annual Savings 2.70% (3614682090)	Hold Constant Opt 4 @ WACC			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (10) * (11)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8) / (10)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 25,551,316	$ 11,509,452	$ 62,125,839	$ 4,094,093	9.09%			$ 15,603,545	3,614,682,090	0.00431671	1000	$ 4.32	$ 51.80
2021	$ 25,551,316	$ 12,200,019	$ 75,477,136	$ 4,973,943	9.09%		$ (463,697)	$ 17,173,962	3,517,085,674	0.00475117	1000	$ 4.75	$ 57.01
2022	$ 25,551,316	$ 13,420,021	$ 87,608,431	$ 5,773,396	9.09%		$ (1,022,452)	$ 19,193,417	3,422,124,360	0.00530985	1000	$ 5.31	$ 63.72
2023	$ 25,551,316	$ 34,312,159	$ 78,847,588	$ 5,196,056	9.09%		$ (3,114,539)	$ 39,508,215	3,329,727,003	0.01092993	1000	$ 10.93	$ 131.16
2024	$ 25,551,316	$ 39,743,882	$ 64,655,022	$ 4,260,766	9.09%		$ (4,563,467)	$ 44,004,648	3,239,824,374	0.01217386	1000	$ 12.17	$ 146.09
2025	$ 25,551,316	$ 39,743,882	$ 50,462,456	$ 3,325,476	9.09%		$ (5,508,751)	$ 43,069,358	3,152,349,115	0.01191512	1000	$ 11.92	$ 142.98
2026	$ 25,551,316	$ 39,743,882	$ 36,269,890	$ 2,390,186	9.09%		$ (6,381,237)	$ 42,134,068	3,067,235,689	0.01165637	1000	$ 11.66	$ 139.88
2027	$ 25,551,316	$ 39,743,882	$ 22,077,325	$ 1,454,896	9.09%		$ (7,183,485)	$ 41,198,777	2,984,420,326	0.01139762	1000	$ 11.40	$ 136.77
2028	$ 25,551,316	$ 39,743,882	$ 7,884,759	$ 519,606	9.09%		$ (7,917,969)	$ 40,263,487	2,903,840,977	0.01113887	1000	$ 11.14	$ 133.67
2029	$ 25,551,316	$ 33,436,075	$ -	$ -	9.09%		$ (7,300,573)	$ 33,436,075	2,825,437,271	0.00925007	1000	$ 9.25	$ 111.00
2030	$ 25,551,316	$ 25,551,316	$ -	$ -	9.09%		$ (6,118,234)	$ 25,551,316	2,749,150,464	0.00706876	1000	$ 7.07	$ 84.83
		10-Year Total		$ 27,894,324			$ (49,574,404)						

110% Target	$ (40,976,338)
100% Target	$ (37,465,815)

10-Yr Totals	$ 423,282,606	$ 27,894,324	Total Savings (from above)	$ 49,574,404
Modeled Rate of Return		9.09%	Savings Split Triggered?	Yes
Add'l Return via Savings (after ta		$ 3,115,939	Savings to Utilities (if applicable	$ 4,299,033
Adjusted Rate of Return		10.11%	Savings to Ratepayers	$ 45,275,371

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Adjusted 10-Year Total $ 31,010,263

ROR capped at 2% above Current WACC/ROR		
Is Adjusted ROR > 2% over WACC		No
If "Yes", Adjusted ROR capped at		11.09%
Adjusted Util. Return via Svgs.	$	-
Check		9.09%

ROR Cap Adjusted Savings to Utilities (if applic.)		
Total Savings (from above)	$	49,574,404
ROR Cap Triggered?		No
Adj. Savings to Utils (if applic.)	$	-

Application of ROR Cap		
Savings to Utilities (if applicable)	$	4,299,033
Savings to Ratepayers	$	45,275,371

Adjusted Rate of Return	10.11%

Utility SMECO

Data Source

PSC Case	9494
PSC Item	177
PSC Maillog	227606
Date	11/22/2019

Notes

Tax Rate - State and Federal 0.00%

Unamortized Balance not available in filings; extrapolated from 4/19 CRWG report

Pay off Unamortized Debt in 10 Years and Continue Program

Net Operating Costs only from Cool Sentry programs

Wholesale Revenues assumed to remain consistent

Performance Incentive Incorporated

Amortization of Program Costs

[redacted]

Option 5: Performance-Based Incentive with Longer Term Repayment

Inputs

	(2)	(3)	(4)	(7)	(9)	(11)
Residential						
Comm'l	$ 10,429,718	$ 6,447,626	$ 18,123,995		$ (228,873)	1318547114
Cool Sent- Res						
Cool Sent - CI				$ 2,519,155	$ 583,264	

								Excess Ratepayer Revenues	Hold Constant Opt 4 @ WACC	Annual Savings 2.70%	Hold Constant Opt 4 @ WACC			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6)	Utility WACC / Rate of Return	Net Operating Costs (Current Year Expense)	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (11) * (12)	Projected Electricity Sales (kWh)	Ratepayer Surcharge (3)+(5)+(7)+(8)+(9) / (10)	Average kWh/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 10,429,718	$ 6,447,626	$ 18,123,995	$ 1,109,188	6.12%	$ 2,519,155		$ 354,391	$ 7,911,205	1,318,547,114	0.00599994	1000	$ 6.00	$ 72.00
2021	$ 10,429,718	$ 6,834,484	$ 21,719,229	$ 1,329,217	6.12%	$ 2,519,155		$ (220,420)	$ 8,163,700	1,282,946,342	0.00619144	1000	$ 6.19	$ 74.30
2022	$ 10,429,718	$ 7,517,932	$ 24,631,015	$ 1,507,418	6.12%	$ 2,519,155		$ (480,789)	$ 9,025,350	1,248,306,791	0.00684492	1000	$ 6.84	$ 82.14
2023	$ 10,429,718	$ 12,892,820	$ 22,167,914	$ 1,356,676	6.12%	$ 2,519,155		$ (1,123,326)	$ 14,249,496	1,214,602,507	0.01080697	1000	$ 10.81	$ 129.68
2024	$ 10,429,718	$ 14,419,942	$ 18,177,689	$ 1,112,475	6.12%	$ 2,519,155		$ (1,610,777)	$ 15,532,417	1,181,808,240	0.01177995	1000	$ 11.78	$ 141.36
2025	$ 10,429,718	$ 14,419,942	$ 14,187,465	$ 868,273	6.12%	$ 2,519,155		$ (1,955,427)	$ 15,288,215	1,149,899,417	0.01159474	1000	$ 11.59	$ 139.14
2026	$ 10,429,718	$ 14,419,942	$ 10,197,240	$ 624,071	6.12%	$ 2,519,155		$ (2,278,427)	$ 15,044,014	1,118,852,133	0.01140954	1000	$ 11.41	$ 136.91
2027	$ 10,429,718	$ 14,419,942	$ 6,207,016	$ 379,869	6.12%	$ 2,519,155		$ (2,580,519)	$ 14,799,812	1,088,643,125	0.01122433	1000	$ 11.22	$ 134.69
2028	$ 10,429,718	$ 14,419,942	$ 2,216,791	$ 135,668	6.12%	$ 2,519,155		$ (2,862,417)	$ 14,555,610	1,059,249,761	0.01103913	1000	$ 11.04	$ 132.47
2029	$ 10,429,718	$ 12,646,509	$ -	$ -	6.12%	$ 2,519,155		$ (2,761,292)	$ 12,646,509	1,030,650,017	0.00959125	1000	$ 9.59	$ 115.09
2030	$ 10,429,718	$ 10,429,718	$ -	$ -	6.12%	$ 2,519,155		$ (2,497,384)	$ 10,429,718	1,002,822,467	0.00791001	1000	$ 7.91	$ 94.92
		10-Year Total		$ 7,313,667				$ (18,370,778)						

110% Target	$ (15,185,666)
100% Target	$ (13,885,083)

10-Yr Totals	$ 119,504,359	$ 7,313,667
Modeled Rate of Return		6.12%
Add'l Return via Savings (after ta		$ 1,592,556
Adjusted Rate of Return		7.45%

Total Savings (from above)	$ 18,370,778
Savings Split Triggered?	Yes
Savings to Utilities (if applicable)	$ 1,592,556
Savings to Ratepayers	$ 16,778,222

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Adjusted 10-Year Total $ 8,906,223

ROR capped at 2% above Current WACC/ROR		
Is Adjusted ROR > 2% over WACC		No
If "Yes", Adjusted ROR capped at		8.12%
Adjusted Util. Return via Svgs.	$	-
Check		6.12%

ROR Cap Adjusted Savings to Utilities (if applic.)		
Total Savings (from above)	$	18,370,778
ROR Cap Triggered?		No
Adj. Savings to Utils (if applic.)	$	-

Application of ROR Cap		
Savings to Utilities (if applicable)	$	1,592,556
Savings to Ratepayers	$	16,778,222

Adjusted Rate of Return	7.45%

Utility **Washington Gas Light**

Amortization of Program Costs

[redacted]

Data Source

PSC Case	9494
PSC Item	171
PSC Maillog	227417
Date	11/18/2019

Notes

Tax Rate - State and Federal 27.52%

Pay off Unamortized Debt in 10 Years and Continue Program

No Dynamic Pricing program data in Filing

Wholesale Revenues assumed to remain consistent

Monthly therm estimate based on total Res and C&I accounts (492,943)

Performance Incentive Incorporated

Option 5: Performance-Based Incentive with Longer Term Repayment

Inputs

Residential				
Commercial	1507360	853927	$ 6,319,836	334,761,000

							Excess Ratepayer Revenues	Hold Constant Opt 4 @ WACC	Annual Savings 2.70%	Hold Constant to Scenario 4b			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Year	Program Cost	Amortization	Unamortized Balance (Prior UB)+(2)-(3)	Return to Utility (4) * (6) * (.7248)	Utility WACC / Rate of Return	Wholesale Revenue	True Up	Ratepayer Revenue Requirement (10) * (11)	Projected Gas Sales (Therms)	Ratepayer Surcharge (3)+(5)+(7)+(8) / (10)	Average Therm/Month per Ratepayer	Estimated Monthly Bill Impact per Ratepayer	Estimated Annual Bill Impact per Ratepayer
2020	$ 1,507,360	$ 853,927	$ 6,319,836	$ 440,655	9.62%			$ 1,294,582	334,761,000	0.00386718	57	$ 0.22	$ 2.63
2021	$ 1,507,360	$ 905,163	$ 6,922,033	$ 482,644	9.62%		$ (37,471)	$ 1,387,807	325,722,453	0.00414566	57	$ 0.23	$ 2.82
2022	$ 1,507,360	$ 995,679	$ 7,433,714	$ 518,321	9.62%		$ (80,652)	$ 1,514,000	316,927,947	0.00452263	57	$ 0.26	$ 3.07
2023	$ 1,507,360	$ 2,250,731	$ 6,690,343	$ 466,489	9.62%		$ (214,206)	$ 2,717,221	308,370,892	0.00811690	57	$ 0.46	$ 5.51
2024	$ 1,507,360	$ 2,711,622	$ 5,486,081	$ 382,521	9.62%		$ (320,876)	$ 3,094,143	300,044,878	0.00924284	57	$ 0.52	$ 6.28
2025	$ 1,507,360	$ 2,711,622	$ 4,281,820	$ 298,553	9.62%		$ (385,014)	$ 3,010,175	291,943,666	0.00899201	57	$ 0.51	$ 6.11
2026	$ 1,507,360	$ 2,711,622	$ 3,077,558	$ 214,585	9.62%		$ (443,176)	$ 2,926,207	284,061,187	0.00874118	57	$ 0.49	$ 5.94
2027	$ 1,507,360	$ 2,711,622	$ 1,873,296	$ 130,617	9.62%		$ (495,577)	$ 2,842,239	276,391,535	0.00849035	57	$ 0.48	$ 5.77
2028	$ 1,507,360	$ 2,711,622	$ 669,034	$ 46,649	9.62%		$ (542,425)	$ 2,758,271	268,928,964	0.00823952	57	$ 0.47	$ 5.60
2029	$ 1,507,360	$ 2,176,394	$ -	$ -	9.62%		$ (475,203)	$ 2,176,394	261,667,882	0.00650134	57	$ 0.37	$ 4.42
2030	$ 1,507,360	$ 1,507,360	$ -	$ -	9.62%		$ (360,936)	$ 1,507,360	254,602,849	0.00450279	57	$ 0.25	$ 3.06
		10-Year Total		$ 2,540,380			$ (3,355,535)						

110% Target	$ (2,772,820)
100% Target	$ (2,534,995)

10-Yr Totals	$ 36,433,880	$ 2,540,380	Total Savings (from above)	$ 3,355,535
Modeled Rate of Return		9.62%	Savings Split Triggered?	Yes
Add'l Return via Savings (after ta		$ 211,176	Savings to Utilities (if applicable	$ 291,358
Adjusted Rate of Return		10.42%	Savings to Ratepayers	$ 3,064,178

If Yes, Utilities receive 50% of Savings in excess of 110% Target (see box above) subject to ROR Cap

Adjusted 10-Year Total $ 2,751,556

ROR capped at 2% above Current WACC/ROR		
Is Adjusted ROR > 2% over WACC		No
If "Yes", Adjusted ROR capped at		11.62%
Adjusted Util. Return via Svgs.	$	-
Check		9.62%

ROR Cap Adjusted Savings to Utilities (if applic.)		
Total Savings (from above)	$	3,355,535
ROR Cap Triggered?		No
Adj. Savings to Utils (if applic.)	$	-

Application of ROR Cap		
Savings to Utilities (if applicable)	$	291,358
Savings to Ratepayers	$	3,064,178

Adjusted Rate of Return	10.42%