BEFORE THE

PUBLIC SERVICE COMMISSION

OF MARYLAND

IN THE MATTER OF THE APPLICATION OF POTOMAC ELECTRIC POWER COMPANY FOR AN INCREASE IN ITS RETAIL RATES FOR THE DISTRIBUTION OF ELECTRIC ENERGY	))))))))	**Case No. 9655**

Direct Testimony of

Melissa Whited

On Behalf of

The Maryland Office of People's Counsel

March 3, 2021

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Exhibit MW-1: Resume of Melissa Whited

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name, title, and employer.

A. My name is Melissa Whited. I am a Principal Associate at Synapse Energy Economics ("Synapse"), located at 485 Massachusetts Avenue, Cambridge, MA 02139.

Q. Please describe Synapse Energy Economics.

A. Synapse Energy Economics (Synapse) is a research and consulting firm specializing in electricity and gas industry regulation, planning, and analysis. Our work covers a range of issues, including economic and technical assessments of demand-side and supply-side energy resources; energy efficiency policies and programs; integrated resource planning; electricity market modeling and assessment; renewable resource technologies and policies; and climate change strategies. Synapse works for a wide range of clients, including attorneys general, offices of consumer advocates, public utility commissions, environmental advocates, the U.S. Environmental Protection Agency, U.S. Department of Energy, U.S. Department of Justice, the Federal Trade Commission, and the National Association of Regulatory Utility Commissioners. Synapse has over 30 professional staff with extensive experience in the electricity industry.

Q. Please summarize your professional and educational experience.

A. I have 12 years of experience in economic research and consulting. At Synapse, I have worked extensively on issues related to utility regulatory models, performance incentive mechanisms, and rate design. In 2015, I was the lead author of a report for the Western Interstate Energy Board titled "Utility Performance Incentive Mechanisms: A Handbook for Regulators," and I have presented on performance incentive mechanisms to the National Association of Regulatory Utility Commissioners, National Governor's Association Learning Lab on New Utility Business Models, Midwest Governors' Association, and the Minnesota e21 Initiative working group.

I have sponsored testimony before the Newfoundland and Labrador Board of Commissioners of Public Utilities, the Georgia Public Service Commission, the Rhode Island Public Utilities Commission, the Massachusetts Department of Public Utilities, the Maine Public Utilities Commission, the California Public Utilities Commission, the Hawaii Public Utilities Commission, the Public Service Commission of Utah, the Public Utility Commission of Texas, the Virginia State Corporation Commission, and the Federal Energy Regulatory Commission. I hold a Master of Arts in Agricultural and Applied Economics and a Master of Science in Environment and Resources, both from the University of Wisconsin-Madison. My resume is attached as Exhibit MW-1.

Q. On whose behalf are you testifying in this case?

A. I am testifying on behalf of the Office of People's Counsel (OPC).

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to address the application of Potomac Electric Power Company (Pepco or the Company) for a Multi-Year Plan (MYP) and Performance Incentive Mechanisms (PIMs). I assess the incentives associated with the MYP and PIMs and describe how Pepco's planning process and PIMs can be modified to deliver more value and performance for customers.

Q Have you testified previously before the Public Service Commission of Maryland or participated in any Commission-sponsored proceeding?

A I have not testified before the Public Service Commission of Maryland (Commission), but I was closely involved on behalf of OPC during both Phase I and Phase II of the working group effort established by the Commission in Case No. 9618 regarding multi-year rate plans and performance incentive mechanisms.

Q. What materials did you rely on to develop your testimony?

A. The sources for my testimony and exhibits are public documents, responses to discovery requests, concurrently filed Direct Testimony from other expert witnesses retained by OPC, and my personal knowledge and experience.

Q. Was your testimony prepared by you or under your direction?

A. Yes. My testimony was prepared by me or under my direct supervision and control.

II. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Q. Please summarize your main conclusions.

A. My conclusions are as follows:

- Pepco's proposed investment plan represents the continuation of a pattern that has resulted in the Company having exceptionally high gross rate base on a per-customer basis. The low risk of disallowance and rapid rate of cost recovery under the MYP construct exacerbates the incentive that Pepco has to over-invest in its system. For these reasons, additional measures are needed to promote cost-effective performance and enhance customer value.

- Tracking metrics can serve as a valuable tool to increase transparency, determine future performance standards, assess the need for and magnitude of future financial rewards or penalties, and gather data to enable a benefit-cost analysis of any proposed PIM. While I do not oppose the tracking of the data that Pepco has proposed, several of the metrics are redundant, or would not provide useful information to inform future PIMs.

- Pepco's proposed tracking metrics are largely inappropriate for full PIMs with financial incentives. The metrics are in many cases redundant and would reward Pepco for activities that it is already committed to undertaking or could easily achieve. In particular, the reliability metrics should not be developed into PIMs, as Pepco is already subject to reliability standards and has provided no information regarding the costs and benefits to customers of incremental reliability improvements. In sum, Pepco's proposed PIMs do little to align Pepco's incentives with the public interest.

Q. Please summarize your recommendations.

A. I offer the following recommendations:

1. The Commission should require Maryland utilities to conduct integrated distribution planning to enhance transparency and facilitate the determination of whether investments included in MYPs are cost-effective relative to alternatives. To accomplish this, I recommend that the Commission initiate a proceeding to develop

these requirements as soon as feasible. Approval of future MYPs should be predicated on the filing and approval of integrated distribution plans.

2. The Commission should reject Pepco's proposed PIMs and instead consider metrics and incentives to encourage Pepco to (a) explore cost-effective non-wires alternatives (NWAs), and (b) empower customers to access and engage with their electricity usage data. Specifically, in this proceeding, I recommend that the Commission implement the following tracking metrics to inform the development of future PIMs:

    i. Net Savings from NWAs
    ii. NWA capacity installed (MW)
    iii. NWA capacity (MW) by Distributed Energy Resource (DER) type
    iv. NWA requests for proposals (RFPs) issued per year
    v. NWA customer participation (percent of customers by rate class)
    vi. Customers viewing Smart Energy Services content
    vii. Customers with Access to Green Button Connect My Data

III. PEPCO'S MYP AND UTILITY INCENTIVES

Q. What is your overall assessment of Pepco's proposed MYP?

A. Pepco continues to invest heavily in traditional utility infrastructure at a rapid clip, with little consideration regarding whether such investments are cost-effective. From 2021 to 2024, Pepco's distribution system investments are projected to increase at an annual growth rate of more than 8 percent.[1] Although Pepco proposes to mitigate the impact of rate increases over the MYP, residential customers will still experience an increase in their distribution bill of nearly 11 percent in Rate Year 3.[2]

This rapid pace and magnitude of investment is even more alarming when one considers that Pepco's gross distribution rate base per customer is already the highest out of 123 investor-owned utilities across the country.[3] Customers cannot be asked to sustain such cost increases indefinitely, particularly when the benefits of these investments are unclear, and lower-cost alternatives may be available.

Q. What factors are driving these cost increases?

A. Fundamentally, I believe that capital bias plays a key role in driving Pepco's investments. It is widely recognized that utilities have a financial incentive to maximize their capital expenditures in order to increase rate base and thereby increase profits, as long as the utility's rate of return is greater than the cost of borrowing. This is often referred to as the Averch-Johnson effect.

Under traditional cost of service regulation, the delay in cost recovery between rate cases (referred to as regulatory lag) can help mitigate a utility's incentive to over-invest in its system. However, under the MYP construct, regulatory lag is virtually eliminated, and

[1] Direct Testimony of Pepco Witness Stewart, Case No. 9655, Schedule (RSS)-1, October 26, 2020, page 26.
[2] Direct Testimony of Pepco Witness Blazuna's Revised Schedule (PRB)-12, Case No. 9655, October 26, 2020.
[3] Panel Direct Testimony of Paul J. Alvarez and Dennis Stephens on behalf of OPC, Case No. 9655, March 3, 2021, pp. 9-10.

the risk of disallowance is small. Because of this, additional protections for customers are urgently needed.

Q. What evidence can you point to that Pepco has a bias towards utility-owned capital solutions?

A. Details regarding Pepco's failure to adequately consider lower-cost alternatives are provided in the testimony of OPC Witnesses Alvarez and Stephens. For example, there were instances in which less expensive solutions were dismissed without adequate discussion of the benefits and drawbacks associated with the lower-cost alternatives. Further, Messrs. Alvarez and Stephens note that NWAs were mentioned only once among all projects' alternatives, and no evaluation of these alternatives' ability to address the risk at hand was completed.[4] The only specific inclusion of NWAs that I am aware of are the battery storage investments that the Company was required to undertake under the Energy Storage Pilot Project Act, which was codified in Maryland Code, Public Utilities Section 7-216.

Q. What additional measures do you propose for increasing customer value?

A. There are several actions that regulators can take to provide greater value for customers. In particular, regulators can:

[4] Panel Direct Testimony of Paul J. Alvarez and Dennis Stephens on behalf of OPC, Case No. 9655, March 3, 2021, p. 20.

1. Reduce the utility's return on equity to recognize the reduced risk that the utility faces due to approval of forward-looking budgets and faster cost recovery;[5]

2. Require integrated distribution planning practices that enhance transparency and facilitate the determination of whether investments are cost-effective relative to alternatives;

3. Implement metrics and PIMs that encourage the utility to deliver greater value to customers.

The remainder of my testimony is focused on the second and third points.

IV. A NEW PLANNING PARADIGM IS NEEDED.

Q. Please elaborate on how integrated distribution planning can help ratepayers.

A. As summarized by ICF, an integrated distribution plan (IDP) "involves two general efforts: 1) multiple scenario-based studies of distribution grid impacts to identify 'grid needs,' and 2) a solutions assessment including potential operational changes to system configuration, needed infrastructure replacement, upgrades and modernization investments, and potential for non-wires alternatives."[6]

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[5] This topic is addressed in more detail in OPC Witness Woolridge's Direct Testimony, Case No. 9655, March 3, 2021, pages 11-12, page 69, and page 71.

[6] ICF International, *Integrated Distribution Planning*, Prepared for the Minnesota Public Utilities Commission, August 2016, at vi. Available at https://www.energy.gov/sites/prod/files/2016/09/f33/DOE%20MPUC%20Integrated%20Distribution%20Planning%208312016.pdf

These studies are generally conducted annually with a 5- to 10- year planning horizon and with considerable input from stakeholders regarding planning assumptions. IDPs also tend to use forecasts with multiple load and DER scenarios to "to assess current system capabilities, identify incremental infrastructure requirements and enable analysis of the locational value of DERs."[7]

Through the IDP process, the utility can solicit input regarding key assumptions (such as DER forecasts); proposals for non-wires alternatives; and feedback regarding the costs and benefits of incremental reliability investments. This type of input is critical for ensuring that the utility is maximizing value to customers while providing grid investments that are responsive to customers' evolving needs.

Further, the *integrated* component of IDP brings together the many different initiatives and objectives that are often siloed in different regulatory proceedings. For example, an IDP could:

- Articulate overall long-term goals and objectives that can guide utility actions and investments;

- Coordinate energy efficiency efforts with grid needs, so that efficiency programs can be better targeted to geographic areas where they can provide the greatest benefit;

[7] *Ibid.*

- Inform the development of reliability standards and investment plans with consideration for both costs and benefits; and
- Comprehensively assess the potential for non-wires alternatives to reduce system costs.

Currently these efforts are occurring in various separate initiatives, including the EmPOWER Maryland docket (Case No. 9494), the electric reliability docket (Case No. 9353), the grid transformation docket (PC44), Pepco's own system capacity plan (based on a forward-looking 10-year peak load forecast), Pepco's annual Long-Range Plan, and the MYP. Because of this fragmented approach, there is little transparency or opportunity for effective input from stakeholders.

Q. Does the MYP proceeding not provide adequate opportunity for stakeholder input and review of a utility's plans?

A. No, for several reasons. First, rate case proceedings are contentious and not conducive to collaboration among the utility and stakeholders. Second, the 210 day rate case timeline does not provide adequate time for an iterative planning process. By the time a utility has filed its MYP, its planning assumptions and results are set, and not easily modified. Third, rate case filings contain a significant number of other issues that must be resolved, including assessment of the prudency of historical investments, the utility's return on equity, and rate design, which require the attention of the utility, stakeholders, and the Commission. Thus, a rate case is an inopportune venue for collaborative distribution planning processes.

Q. Have other commissions required utilities to undertake integrated distribution planning?

A. Yes. I briefly highlight four examples below:

Michigan

The Michigan Public Service Commission directed the Michigan utilities to develop and submit five-year plans that include benefit-cost analyses as well as analysis of alternatives, including emerging technologies. The Michigan Public Service Commission subsequently stated:

> [T]here are significant benefits associated with a comprehensive and forward-looking approach to distribution planning that leverages greater Commission and stakeholder input. A longer-term planning approach will help the Commission and stakeholders better understand the long-term goals and objectives underlying utility investment plans and how the execution of these plans can meet these goals and objectives in an affordable manner.[8]

Minnesota

Minnesota has been a leader in integrated distribution planning and requires its utilities to conduct comprehensive, coordinated, transparent, integrated distribution plans on an annual basis. A critical component to this process is the consideration of non-wires alternatives. For

[8] Michigan Public Service Commission, Case No. U-18-014, October 11, 2017, at 14-15.

any project with a total cost greater than $2 million dollars is subject to an "analysis on how non-wires alternatives compare in terms of viability, price, and long-term value."[9]

California

As part of its Distribution Resource Plan process, the California Public Utilities Commission requires the utilities to file an annual Grid Needs Assessment and Distribution Deferral Opportunity Report:

- The Grid Needs Assessment lists the grid needs and planned investments that result from the utilities' annual planning process.
- The Distribution Deferral Opportunity Report provides a list of candidate distribution deferral opportunities that result from an initial deferral screening process.

The Commission stated that a primary purpose of this effort "is to provide transparency into the assumptions and results of the distribution planning process that yield the candidate deferral shortlist, proposed grid modernization investments, and proactive hosting capacity upgrades proposed to accommodate forecast autonomous DER growth. This will allow the Commission and stakeholders to ensure that the candidate deferral shortlist meets the objective of maximizing ratepayer benefits of DERs." [10]

[9] Minnesota Integrated Distribution Planning Requirements for Xcel Energy, Docket E002/CI-18-251, August 30, 2018, page 7.
[10] California Public Utilities Commission, Rulemaking 14-08-013, February 15, 2018, p. 33.

New York

In 2016, the New York Public Service Commission directed each utility to file utility Distributed System Implementation Plans (DSIP) "addressing its own system and identifying immediate changes that can be made to effectuate state energy goals and objectives."[11] The DSIPs require that the utilities provide information and conduct analysis in numerous areas, including:

a. Forecast of demand and energy growth (with 8760 data)
b. Capital investment plans
    i. Identify impact DER may have on deferring or avoiding capital investments.
    ii. Historical and future capital budgets
    iii. Identify beneficial locations for DER (e.g., where DER can provide the most value)
    iv. Describe the process used to identify NWAs and propose an improved screening process
    v. Explain how the utility proposes to maximize DER in such beneficial locations
c. Specify near-term effects of DERs on system operations by DER type, and how it can be managed to ensure reliability (through communications protocols, etc.)

[11] New York Public Service Commission, Case 14-M-0101, Order Adopting Distributed System Implementation Plan Guidance, April 20, 2016, p. 3.

Q. Is Pepco's Long-Range Plan similar to an IDP?

A. No. Pepco's Long-Range Plan differs from an IDP in numerous ways. For example, the Long-Range Plan provides little information regarding the Company's long-term goals guiding its investments; includes no underlying information regarding load forecasts or DER forecasts; is not developed with stakeholder input; and does not discuss the viability of alternative investments, such as DERs.

Q. What do you recommend with respect to IDP in Maryland?

A. I recommend that the Commission expeditiously initiate a proceeding to develop detailed IDP requirements for Maryland utilities. In addition to drawing from the experiences of jurisdictions highlighted in the above examples, I recommend that the Commission use the NARUC-NASEO Task Force on Comprehensive Electricity Planning's recently released Blueprint for State Action and Jade Cohort Roadmap as a resource. My understanding is that the Commission will hold a virtual technical conference on March 25, 2021 to consider these reports as part of PC44. I fully support the Commission's initiative, and I encourage the Commission to establish a schedule and process for the development of detailed IDP recommendations by the conclusion of 2021.

V. PEPCO'S PROPOSED TRACKING METRICS

Q. Please provide an overview of the Company's PIMs proposal.

A. The Company is proposing five "tracking only" PIMs:

- Two reliability-related: Customer Average Interruption Duration Index (CAIDI) and Customers Experiencing Multiple Interruptions 4 (CEMI-4)

- One customer service-related: First Call Resolution
- Two environment-related: Electric Vehicle charger installation and Greenhouse Gas (GHG) reductions.

The PIMs will cover the calendar years 2021 through 2023. Pepco states that it will provide a PIM performance report twice a year during the MYP term.[12] A summary of these tracking metrics, as included in Witness McGowan's Direct Testimony, is presented in Table 1 below.

Table 1. Pepco Proposed Tracking Metrics

Category	Metric	Measurement	Goal	Upper/Lower Band
Reliability	CAIDI	Actual CAIDI results	2021-2022 = 101.1 2023 =102.2	+7.2-7.3 / -12.6 – 12.8
Reliability	CEMI4	Percent of customers experiencing > 4 outages in the year	2.5%	+ .5% / - .4% points
Customer Service	First Call Resolution	Percent of calls resolved on first call	2021-2022 = 75% 2023 = 80%	+/- 5% points
Environment	GHG Emissions Reduction	Reduction of GHG emissions by Pepco	2021 = 21,390 2022 = 20,962 2023 = 20,543	+/- 10%
Environment	EV Chargers Installation	Cumulative number of public chargers installed	Complete 6 months early 2021 = 102 2022 = 178 2023 = 250	Threshold: complete per EVCS plan; Stretch: complete 1 year early

Source: Direct Testimony of Kevin M. McGowan, Table 2 at 31.

[12] Direct Testimony of Pepco Witness McGowan, Case No. 9655, October 26, 2020, p. 32.

Q. What is meant by "tracking only PIMs"?

A. The Company explains that these PIMs are "tracking only" because they do not include any financial impacts (i.e., rewards or penalties) for meeting or failing to meet the targets.[13]

Q. What guidance has the Commission provided regarding PIMs?

A. In Order No. 89638, the Commission stated that utilities may propose PIMs in any newly-filed rate case, whether MRP or traditional.[14] The Commission indicated that it expects any utility PIM proposal to be "tethered to a recognized State policy, accelerate the policy goal beyond the current utility's capabilities, show measurable benefits to ratepayers, and contain metrics which show baseline data over a specific timeframe."[15]

Q. Does Pepco's proposal meet the Commission's guidance for PIMs?

A. No. The Company's proposal does not meet the definition of PIMs, as it does not contain any financial incentives (penalties or rewards). As defined by the Public Conference 51 (PC51) Working Group, a PIM is "a ratemaking component/mechanism that adopts specific metrics, targets, and **financial incentives** to effect desired utility performance designed to support specified State policies [emphasis added]."[16] Further, Order No. 89638 states that the Commission will permit utilities to propose PIMs that show "the

[13] Direct Testimony of Pepco Witness McGowan, October 26, 2020, Case No. 9655, p. 28.
[14] Maryland Public Service Commission, Order No. 89638 Approving Performance Incentive Mechanisms, Case No. 9618, p. 12.
[15] Id. at 16.
[16] *Exploring the Use of Alternative Rate Plans or Methodologies to Establish New Base Rates for an Electric Company or Gas Company*, PC51, and *In the Matter of Alternative Rate Plans for Methodologies to Establish New Base Rates for an Electric Company or a Gas Company*, Case No. 9618, Phase II Report on Performance Based Regulations, June 17, 2020, at iv.

policy goals and metrics to be achieved, **proposed rewards and penalties**, and an expected timeline of performance…[emphasis added]."[17]

Q. Is it appropriate to use the term "PIMs" to describe Pepco's proposal?

A. No. Because Pepco's "PIMs" do not include a penalty or reward, the term PIM should not be used to describe them. Instead, Pepco has submitted a proposal for "tracking metrics" that may eventually become PIMs. Pepco indicates that it expects that the tracking metrics proposed in this case to be developed over the MYP term and become part of a PIM program, including incentives and penalties, in the next rate case.[18]

Q. Why has Pepco proposed tracking metrics instead of PIMs?

A. Witness McGowan states that Pepco is proposing tracking metrics instead of PIMs to allow the parties and the Commission to gain experience with metric development, tracking, and reporting. Further, Pepco claims that its proposed tracking metrics "do not have a robust history of data and trends as compared to the traditional operational metrics," and that tracking this data over the 2021-2023 MYP "will provide the parties with additional information and data on trends and variations to assist in the review of targets and financial incentives and penalties to be established in the next rate case when a full PIM program is proposed."[19]

[17] Maryland Public Service Commission, Order No. 89638 Approving Performance Incentive Mechanisms, Case No. 9618, p. 16.
[18] Direct Testimony of Pepco Witness McGowan, Case No. 9655, October 26, 2020, p. 29.
[19] *Ibid*.

Q. What is your view on the usefulness of tracking metrics?

A. I am highly supportive of tracking metrics for increasing transparency regarding a utility's performance across multiple dimensions. In fact, OPC recommended multiple tracking metrics during the PC51 Phase II Working Group. Tracking metrics can provide the Commission and stakeholders with relevant and timely information concerning the achievement of both the utility's core responsibilities (such as reliability) and energy policy goals. However, tracking metrics should not necessarily become PIMs. Instead, I recommend that regulators take an incremental approach and only provide financial incentives when necessary and beneficial to customers.

Q. Please describe the incremental approach that you recommend in greater detail.

A. I recommend that the Commission require tracking key performance metrics, but that financial incentives only be provided to utilities when needed to offset a countervailing incentive, or when otherwise necessary to focus utility management attention on a specific performance area. As described in *Utility Performance Incentive Mechanisms: A Handbook for Regulators,* full PIMs may not be necessary. Instead, the Commission need only implement the steps that are required to achieve the desired performance level:[20]

- First, dimensions of utility performance are identified that are of particular interest or concern.

[20] Whited, M., T. Woolf, and A. Napoleon, Utility Performance Incentive Mechanisms: A Handbook for Regulators. Prepared by Synapse Energy Economics. Denver: Western Interstate Energy Board. March 9, 2015. Available at www.synapse-energy.com/sites/default/files/Utility%20Performance%20Incentive%20Mechanisms%2014-098_0.pdf.

- Second, performance metrics and reporting are established to monitor utility performance across key areas.
- Third, specific performance targets can be set if needed to provide a clear signal regarding the level of performance that is expected of a utility.
- Finally, if necessary, financial rewards and penalties can be applied to increase the utility's motivation to achieve the performance targets.

This incremental approach allows regulators and utilities to learn from each step before designing and implementing the next step. It also enables regulators to review utility performance without implementing financial rewards or penalties where such incentives are not necessary, or where the risk associated with rewards or penalties is too high (e.g., when many factors outside of utility control may influence performance). In fact, many jurisdictions elect to simply implement tracking metrics without any set plan to apply financial incentives.

Q. Do you support Pepco's proposal for tracking metrics?

A. While I support the adoption of tracking metrics generally, I find that:

- Several of Pepco's proposed tracking metrics are redundant,
- The proposed tracking metrics are inappropriate for full PIMs (with financial incentives), and

- The proposed tracking metrics do not address certain important energy policy goals.

I therefore recommend that the Commission reject several of Pepco's proposed tracking metrics, deny Pepco's proposal that its tracking metrics become full PIMs in the next rate case, and require that Pepco implement alternative tracking metrics for non-wires alternatives (NWAs) and customer empowerment. I describe these critiques and recommendations in the following sections of my testimony.

VI. PEPCO'S PROPOSED TRACKING METRICS SHOULD NOT BECOME PIMS

Reliability Tracking Metrics

Q. Please summarize Pepco's proposed reliability metrics.

A. Pepco has proposed tracking metrics for CAIDI and CEMI-4. CAIDI measures the average duration of an outage and is defined as the System Average Interruption Duration Index (SAIDI) divided by the System Average Interruption Frequency Index (SAIFI). Pepco created annual targets with upper and lower bands based on past performance and historical industry benchmarking results.[21]

CEMI-4 is defined as the percent of customers experiencing four or more interruptions over a 12-month period. Pepco's proposed target is 2.5 percent each year, with an upper and lower band of 3.0 percent and 2.1 percent respectively. Pepco created the upper and lower bands by examining past performance and using historical industry benchmarking

[21] Direct Testimony of Pepco Witness Stewart, Case No. 9655, October 26, 2020, pp. 12-14.

results. Pepco states that its improvement in CEMI-4 has been less linear than its system-wide SAIFI and SAIDI performance and developing a formal tracking metric would better align Pepco's financial performance with its operational performance in neighborhood reliability.[22]

Q. Do you support the creation of new tracking metrics for CAIDI or CEMI-4?

A. No. While I support reporting of both CAIDI and CEMI-4 statistics, Pepco already reports these as part of its Service Quality and Reliability Annual Performance Report. Thus, the creation of additional metrics in this proceeding is not necessary. Instead, I recommend that Pepco augment its annual reliability report to include trends in both CAIDI and CEMI-4 so that the Commission and stakeholders can more readily discern whether performance is improving or deteriorating. In addition, I recommend that Pepco make CEMI performance data by neighborhood available for download through a link on its website so that stakeholders can understand where problem areas occur on Pepco's system and the steps Pepco is taking to address these issues.

Q. Should CAIDI or CEMI-4 be considered for future PIMs with the potential for financial rewards?

A. No, for multiple reasons. First, the Maryland Electricity Service Quality and Reliability Act already requires each electric company to provide high levels of service quality and reliability,[23] and the Commission has established specific SAIFI and SAIDI standards for each utility. Pursuant to PUA § 7-213(f)(2), the Commission may impose

[22] Direct Testimony of Pepco Witness Stewart, Case No. 9655, October 26, 2020, pp. 14-15.
[23] Section 7-213(b) of the Public Utilities Article ("PUA") of the Maryland Code

penalties for failure to meet applicable service quality and reliability standards. Given that specific standards already exist and there is potential for penalties under existing regulations, it would be duplicative to create a new PIM for CAIDI that addresses fundamentally the same area of performance. If the CEMI-4 tracking metric indicates problems with specific aspects of reliability, I support the consideration of additional reliability standards under the service quality and reliability standards defined in COMAR 20.50.12, or through a penalty-only PIM. However, such standards should be set so that they balance the benefits associated with improvements in reliability with the incremental costs of reliability investments. It is important to recognize that there may be diminishing returns to Pepco's reliability investments, and at some point the value of improved reliability may exceed the incremental cost of providing it. Pepco has not provided a benefit-cost analysis that would enable the Commission or stakeholders to set CAIDI or CEMI-4 targets that balance the costs to customers with the incremental value to customers.

Further, I would not support a PIM that provides Pepco with the opportunity to earn additional profit for making reliability investments for two reasons:

1. Reliability is a core responsibility of the utilities, and the utilities should not be provided with financial rewards for performing their key duties.

2. Pepco already earns a return on its capital investments and therefore already has a financial incentive to invest in its system.

Indeed, Pepco's recent reliability enhancements and proposed reliability investments during the MYP demonstrate the incentive that Pepco has to invest in reliability. For example, Pepco states that it has developed tools to address CEMI including "a daily CEMI alerts flag when a customer has a second outage for the year, a CEMI dashboard, reporting and tracking of CEMI performance by neighborhood, and the establishment of a formal, budgeted CEMI program."[24]

Moreover, Pepco's MYP calls for steep increases in reliability spending. Pepco's forecast for reliability-related spending through 2024 in Table 2 below shows that reliability spending is projected to increase dramatically over the next four years.[25] Reliability spending is projected to increase from $100 million in 2020 to $237 million in 2024.

Table 2. Forecast Capital and Labor Expenditures Related to Reliability

	2020F	2021F	2022F	2023F	2024F	Total
Total Reliability ($000s)	$100,281	$137,819	$176,669	$217,231	$237,235	$869,236
Year-on-Year Change	-	37.4%	28.2%	23.0%	9.2%	-

Source: Case No. 9353, Errata to Potomac Electric Power Company's Annual Performance Report covering the period of January 1, 2019 through December 31, 2019, filed July 1, 2020.

Q. Are there any other reasons that you do not support PIMs based on Pepco's proposed reliability tracking metrics?

A. Yes. I do not believe that CAIDI provides a good indication of reliability, and I am concerned that Pepco's proposed reliability targets would not encourage the utility to improve its performance beyond what it has already achieved.

[24] Direct Testimony of Pepco Witness Stewart, Case No. 9655, October 26, 2020, p. 16.
[25] Pepco, Case No. 9353, Errata to Potomac Electric Power Company's Annual Performance Report covering the period of January 1, 2019 through December 31, 2019, filed July 1, 2020.

Q. Please explain your concern regarding CAIDI.

A. I am concerned that CAIDI does not provide a useful indication of reliability on Pepco's system. As described above, CAIDI is simply SAIDI divided by SAIFI. Due to its mathematical formulation, if the denominator (SAIFI) increases but the numerator (SAIDI) remains constant, CAIDI will decline. Thus, an improvement in CAIDI could actually signal an *increase* in the frequency of outages, rather than any improvement in reliability. Conversely, if both SAIDI and SAIFI decline, but SAIDI declines proportionately less than SAIFI, then CAIDI will increase. In this case, worsening CAIDI would not necessarily imply a reliability problem, but rather that the frequency of outages was declining faster than the duration of outages. For these reasons, CAIDI conveys less useful information than SAIDI and SAIFI and should not lead to a financial reward or penalty.

Q. Please explain your concerns regarding the reliability targets that Pepco set for this MYP.

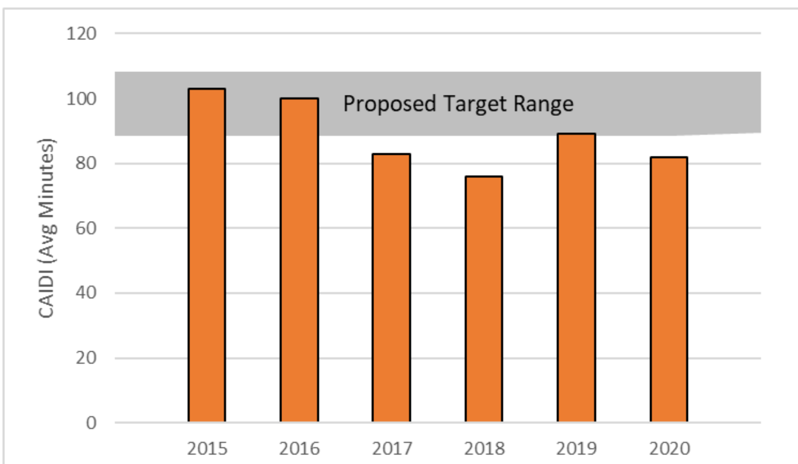
A. I do not find Pepco's proposed CAIDI and CEMI-4 targets to be sufficient to drive changes in performance. As shown in Table 3 and Figure 1 below, Pepco's historical CAIDI performance has been improving over recent years. In three of the four most recent years, CAIDI has actually been *below* Pepco's proposed lower band of its target performance range.

Table 3. Pepco CAIDI Historical Performance and Proposed Targets

	Year	CAIDI	Upper/Lower Band
Historical	2015	103	-
	2016	100	-
	2017	83	-
	2018	76	-
	2019	89	-
	2020	82	-
Proposed Targets	2021	101.1	108.3 / 88.5
	2022	101.1	108.3 / 88.5
	2023	102.2	109.5 / 89.4

Source: Historical CAIDI data for years 2015-2020 from Pepco Response to OPC DR 11-18(a).

Figure 1. Pepco CAIDI Historical Performance and Proposed Target Performance Range



Source: Historical CAIDI data for years 2015-2020 from Pepco Response to OPC DR 11-18(a).

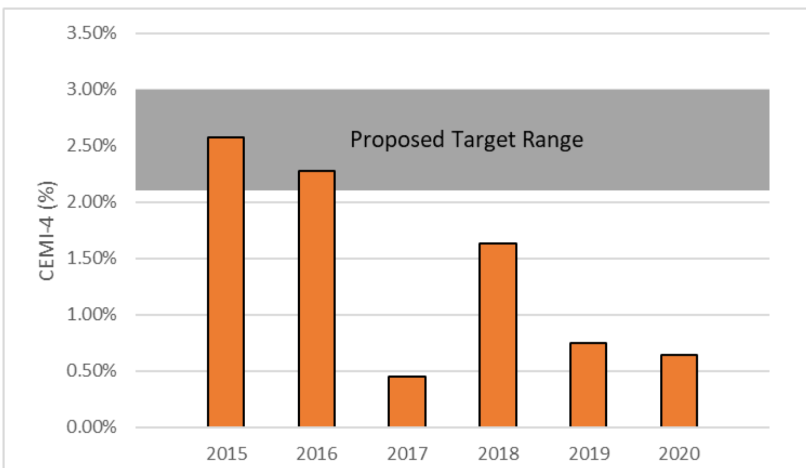
The same is true for Pepco's CEMI-4 targets. Table 4 below shows Pepco's historic CEMI-4 performance compared to its proposed targets for the MYP. Since 2016, Pepco has performed better than its proposed CEMI-4 target. In fact, Pepco's performance was superior to the lower band of its target performance range in years 2017 through 2020.

Table 4. Pepco CEMI-4 Historical Performance and Proposed Targets

	Year	CEMI-4	Upper/Lower Band
Historical	2015	2.58%	-
	2016	2.28%	-
	2017	0.45%	-
	2018	1.63%	-
	2019	0.75%	-
	2020	0.64%	-
Proposed Target	2021	2.50%	3.0% / 2.1%
	2022	2.50%	3.0% / 2.1%
	2023	2.50%	3.0% / 2.1%

Source: Historical CEMI-4 data for years 2015-2020 from Pepco Response to OPC DR 11-22(a).

Figure 2. Pepco Historical CEMI-4 Performance and Proposed Target Performance Range



Source: Historical CEMI-4 data for years 2015-2020 from Pepco Response to OPC DR 11-22(a).

Thus, Pepco is proposing no improvements to its recent performance; rather, Pepco has set targets for itself that would allow its performance to significantly worsen while still meeting its targets.

Q. What do you recommend regarding Pepco's proposed reliability tracking metrics?

Given that Pepco is already subject to penalties for failure to meet reliability standards, the existing financial model already rewards Pepco for reliability investments, and Pepco has failed to challenge itself to improve CAIDI and CEMI-4 performance during the MYP, I recommend that the Commission dismiss Pepco's proposal that these reliability tracking metrics become PIMs in the next rate case.

<u>First Call Resolution Tracking Metric</u>

Q. Please describe First Call Resolution metric.

A. Pepco describes First Call Resolution (FCR) as "a measurement of customers' perception of their question being answered or their problem resolved in their first call for that issue."[26]

Q. Does Pepco currently track FCR?

A. Yes. In accordance with Order No. 89629, the Company currently tracks FCR.[27] To comply with this Order, the Company tracks FCR using an automated analysis of the phone calls received by the call center. This process tracks the number of times a phone number calls the call center during a three-day span. If a number calls more than once during the three-day span, it is assumed the call was not resolved the first time. If a number doesn't appear more than once within three days, it is assumed that call was resolved on the first call. The Company calculates its current FCR metric by dividing the number of calls not appearing more than once by the total number of calls. The result of this tracking metric in 2020 was approximately 80 percent.[28]

[26] Direct Testimony of Pepco Witness Bell-Izzard, Case No. 9655, October 26, 2020, p. 20.
[27] Id. at 21.
[28] Id. at 22.

Q. What does Pepco propose for an FCR tracking metric?

A. Pepco is proposing a new way to measure FCR for its proposed MYP tracking metric. Instead of using the automated analysis of phone calls received by the call center, Pepco proposes to survey customers. Pepco will use its daily automated post-call survey to ask customers whether their initial call center question was answered, or their problem was resolved in their first call. The Company would then calculate the annual mean score for those calls where the customer responded favorably that their issue was resolved on the first call. Pepco proposes a performance target metric for the first two years of the MYP at 75 percent and 80 percent for year 2023. These targets would exclude calls related to outages, agency assistance numbers, non-CSR, internal company numbers, and internal company numbers.[29]

Q. Has Pepco previously used a post-call survey to determine FCR?

A. Pepco reports that since 2018, it has used a post-call survey to determine customers' perspective of FCR. However, due to a technical issue, Pepco is unable to retrieve results prior to May 2020. Since May 2020, the survey has yielded results of between 83 percent and 88 percent.[30]

Q. Do you support Pepco's new tracking method for FCR?

A. I find that Pepco's proposed customer survey would provide additional information to help it better understand its call center performance. I support Pepco's proposal to track this information as long as it does not replace the automatic analysis currently used by

[29] Direct Testimony of Pepco Witness Bell-Izzard, Case No. 9655, October 26, 2020, pp. 21-22.
[30] Pepco Response to OPC DR 11-24 (b).

Pepco in response to Order No. 89629. I recommend that Pepco continue tracking FCR using the automated methodology to help ensure there is not a worsening of performance relative to historical levels.

Q. Should FCR be considered for a PIM in the next rate case?

A. No. I do not believe that this PIM is needed to encourage Pepco to undertake actions it would not have already taken, nor is it clear that the benefits associated with improved first call resolution would be worth the costs. As Pepco Witness Bell-Izzard indicates, in the case of FCR, the Company already has an overall goal to deliver premier customer service performance relative to its peers in the industry. Further, he states the Company considers FCR as a best practice in its performance regarding improving overall customer satisfaction.[31] Pepco indicates that it is already committed to improving FCR and overall customer satisfaction.

In addition, Pepco's proposed targets for the MYP do not encourage the Company to improve its performance. According to recent survey results, 83 to 88 percent of issues are already resolved in the first call, indicating that Pepco's proposed target of 75 percent for 2021 and 2022 is a low bar.

For these reasons, I recommend that FCR not be made a full PIM in the next rate case.

[31] Direct Testimony of Pepco Witness Bell-Izzard, Case No. 9655, October 26, 2020, pp. 20-21.

Electric Vehicle Charging Station (EVCS) Installations

Q. Please summarize Pepco's proposal for an EVCS Installation tracking metric.

A. Pepco's proposed EVCS metric would track the cumulative number of public electric vehicle charging stations installed in each year of the MYP through its public charging program as approved in Case No. 9478. The tracking metric contains cumulative installation targets. Pepco indicates that the targets will allow the Company to measure and monitor annual progress of the program and ensure resources are efficiently planned and allocated.[32] Pepco indicates the goal is to accelerate the deployment of all EVCS by six-months (target goal) and 12-months (stretch goal).[33]

Q. Please explain your concern with Pepco's proposed EV Charging Station metric.

A While I am not opposed to Pepco tracking its EVCS installation performance, I have concerns regarding this metric for multiple reasons.

First, the metric appears to be redundant, as Pepco already reports on the status of its public EVCS installations as part of its Semi-Annual Progress Report to the Commission. Through this reporting framework it will be evident if Pepco is falling behind on the deployment of its public charging network. While I support the continued tracking of this progress through those reports, it is not necessary to establish a new tracking metric in this proceeding.

[32] Direct Testimony of Pepco Witness McGowan, Case No. 9655, October 26, 2020, p. 33.
[33] Pepco Response to OPC DR 11-4.

Lastly, the installation of these chargers will be mostly complete by the next rate case, making the establishment of a PIM with financial incentives in the next rate case moot. Specifically, Pepco's five-year EV Pilot commitment is for 250 public charging stations to be installed by 2025. Unless Pepco is authorized to install additional charging stations after 2025, there will be no need for continued tracking or a PIM within the next rate case.

Q. Please explain why the EVCS Installation tracking metric should not qualify for financial incentives in a future PIM.

A. PIMs with financial incentives should only be applied where the utility has a disincentive to align its performance with the public interest. Pepco already has a strong incentive to install EVCS in a timely manner as it will earn a return on those assets. As directed by the Commission in Order No. 88997 of Case No. 9478, the Company was authorized to defer all incremental costs related to its EV pilot project into a regulatory asset and now seeks approval of such costs, including a rate of return, in this MYP.[34] Due to the fact the Company will earn a return on its investment in EVCS, an additional performance incentive would not be in the best interest of ratepayers.

Second, as currently defined, the metric provides no indication of the benefits to customers associated with the target. Although Pepco indicates this metric will help in the attainment of Maryland's zero-emission vehicle (ZEV) goals,[35] Pepco does not provide any indication as to how an advancement of its installation timeline by 6 months or 12

[34] Pepco Response to OPC DR 11-6(a).
[35] Pepco Response to OPC DR 11-4.

months will directly lead to incremental new purchases of ZEVs. That is, Pepco does not explain how it would quantify and monetize the benefit to customers of installing EVCS earlier than what is approved in its plan. If Pepco wants to propose an incentive associated with earlier installation of EVCS in a future PIM, it should be required to justify why ratepayers should pay for any reward associated with the attainment of its target. Specifically, Pepco should demonstrate that the benefit of earlier installation offsets the cost of both the more rapid installation timeline and the costs associated with a financial reward. Because Pepco's proposed tracking metric does not provide any information regarding how it will quantify the benefits to customers, there is no means of ensuring that the benefits outweigh the costs, and thus it would not be appropriate to provide Pepco with financial incentives associated with this metric.

<u>Greenhouse Gas Performance Tracking Metric</u>

Q. Please summarize Pepco's proposal for a GHG tracking metric.

A. Pepco proposes to track its progress towards an annual GHG target, reported as CO_2e in tons/yr, for each year of the MYP. The GHG target is based on the estimated contribution of the Company's Maryland operations to a calendar year 2020 GHG target for Maryland and District of Columbia operations combined. To encourage improved performance over time, Pepco proposes a 2 percent reduction in the GHG target in each year of the MYP. Pepco further applies a 10 percent upper and lower band to these targets to account for uncertainty in tracking Maryland emissions separately. Pepco proposes to meet this target from reducing CO_2e from sources over which it has direct operational control. These sources include emissions from building electricity usage, fleet vehicle fuel usage, and sulfur hexafluoride (SF_6) emissions from operational equipment.[36]

Q. Please explain your concern with Pepco's proposed GHG tracking metric.

A. While I appreciate the Company's proposal to track Maryland-specific emissions from its operations, it is unclear what incremental benefit to customers this metric will provide, or that the targets in any way "accelerate the policy goal beyond the current utility's capabilities" as required by the Commission.

Pepco, as part of Exelon-wide efforts, has an existing goal of reducing GHG emissions from internal operations across its footprint (emissions controllable by its employees and processes).[37] According to Pepco Witness McGowan, Pepco has already exceeded its internal goal; as of 2019, Pepco had reduced emissions by approximately 42 percent from 2015 levels.[38] While I commend Pepco for achieving a 42 percent emissions reduction over four years, I do not believe that Pepco's proposed 2 percent annual emissions reduction target represents a goal "beyond the current utility's capabilities."

This is further highlighted in Table 5 below, where I show Pepco's historical GHG emission totals as provided in discovery. Since Pepco did not track GHG emissions separately for Maryland prior to 2020, I apply the Company's estimate that Maryland

[36] Direct Testimony of Pepco Witness McGowan, Case No. 9655, October 26, 2020, pp. 35-37.
[37] Exelon Corporation CDP Climate Change Questionnaire 2020 Wednesday, August 26, 2020. Available at: https://www.exeloncorp.com/sustainability/Documents/Exelon_Investor_CDP.pdf.
[38] Direct Testimony of Pepco Witness McGowan, Case No. 9655, October 26, 2020, p. 37.

operations represent 52 percent of that total. This table indicates that emissions were lower than the proposed 2021 target in 2017, 2019, and 2020.

Table 5. Historical GHG Emissions and Proposed Emissions Targets

Total Pepco Emissions Estimates by Source (MT CO2e)			
	Pepco (MD + DC)	**Pepco MD**	**Pepco MD (52%)**
Historical			
2016	47,255	*	24,573
2017	39,016	*	20,288
2018	41,371	*	21,513
2019	37,623	*	19,564
2020	40,615	22,016	21,120
Proposed Targets in MYP			
2021			21,390
2022			20,962
2023			20,543

Source: Pepco Response to Staff DR 67-7.

Given the variability in emissions over time and Pepco's recent admirable performance in GHG emissions reduction, it is not clear how this tracking metric will incentivize Pepco to take any actions beyond business as usual.

A Please explain why you do not support the proposed GHG tracking metric as a future PIM.

A. Pepco has already made significant progress in achieving GHG emissions reductions without an incentive. It is clear that Exelon and Pepco are already committed to reducing emissions from internal operations in a manner that is aligned with Maryland's state energy policy goals. It is not apparent that providing a financial incentive would provide any incremental benefit to ratepayers; rather it would likely reward Pepco for achieving results that it would have achieved anyway.

Finally, I have an additional concern that Pepco's proposal could allow the Company to time certain investments, as to slow emissions reductions in the near-term but expedite emissions reductions when a financial incentive is available. Specifically, Pepco could slow emissions reductions during this MYP, thereby setting a low emissions reductions baseline and target, which could be easily exceeded in future years once a financial incentive is available.

VII. ADDITIONAL METRICS SHOULD BE TRACKED

Q. Are you proposing any tracking metrics for inclusion in Pepco's current MYP proposal?

A. Yes. I find that Pepco's proposed tracking metrics are focused on its core utility obligations and do not move beyond business-as-usual efforts. Therefore, I am proposing five metrics related to the deployment of NWAs and two metrics related to customer empowerment.

NWA Tracking Metrics

Q. Please explain the importance of investment in NWA solutions.

A. NWAs are investments or projects that can defer or avoid the need for equipment of upgrades to the distribution system at a lower cost than the traditional solution. They can include a variety of customer-controlled demand-side resources or grid-side investments such as energy efficiency, demand response, solar PV, and storage. Incentivizing utilities to invest in cost-effective NWAs instead of traditional wires-side investments can create multiple benefits, including cost savings for customers, customer empowerment, and emissions reductions.

Q. What is your proposal for NWA tracking metrics?

A. I propose the following five metrics to track Pepco's actions towards procuring NWA solutions:

1. Net Savings from NWAs
2. NWA capacity installed (MW)
3. NWA capacity (MW) by DER type
4. NWA request for proposals (RFPs) issued per year
5. NWA customer participation (% of customers by rate class)

Q. How will these metrics support Maryland's policy objectives?

A. Increasing investment in cost-effective NWAs will help to promote the efficient and innovative delivery of public utility services. Incentivizing Pepco to invest in cost-effective NWAs instead of traditional wires-side investments can produce cost savings for customers and encourage the adoption of distributed energy resources (DERs) like storage.

Q. Why are NWA tracking metrics needed?

A. Although Pepco states that it has "recently begun the practice of looking at non-wires alternatives to traditional infrastructure projects,"[39] there is little transparency regarding what steps Pepco is actually taking to procure such alternatives. Reporting the five tracking metrics above would provide insight into the effort that Pepco is making in this regard.

[39] Direct testimony of Pepco Witness Stewart, Case No. 9655, October 26, 2020, p. 42.

Q. Why is there a need to monitor the steps that Pepco is taking to explore NWAs?

A. Like most utilities, Pepco has a disincentive to promote NWAs, since they reduce the need for utility capital investments on which the Company earns a return. Further, utilities often prefer to invest in traditional solutions compared to NWAs due their lack of familiarity and experience with procuring, constructing, and operating the NWA solution.

To combat this disincentive, greater transparency is needed regarding the utility's pursuit of non-traditional alternatives. The metrics that I proposed could also be used to potentially design future PIMs regarding NWAs. For example, a future NWA PIM based on the net-shared savings from the NWA solution compared to the traditional wires solution could be implemented to allow the Company to benefit from the development of cost-effective NWAs.

Customer Empowerment Tracking Metrics

Q. Please describe your proposal for Customer Empowerment tracking metrics.

A. I propose two tracking metrics to support customer empowerment and maximize the benefits to customers of Pepco's investments. My proposed tracking metrics are shown in Table 6 below. These metrics would track the number of customers accessing Pepco's Smart Energy Services platform, and the number of customers with Green Button Connect My Data (CMD) functionality enabled.

Table 6. Proposed Customer Empowerment Tracking Metrics

Metric	Measurement	Outcome
Customers viewing Smart Energy Services content	Percent of customers by rate class accessing Smart Energy Services content on Pepco's	Promotes enablement of customer access to more granular energy usage data that can help customers take control of energy usage

	website, measured by unique annual customer views	
Customers with Access to Green Button Connect My Data	Percent of customers with access to Green Button Connect My Data, by rate class	Incentivizes the utilization of Green Button Connect My Data functionality which will aid in customer energy management and facilitate customer-enabled data access by third-party vendors and DER developers

The purpose of these metrics is to track the extent to which Pepco is actively empowering and encouraging customers to access and use their energy data to better understand and manage their electricity consumption, including through the use of third-party energy service or distributed energy resource (DER) providers. Not only can this knowledge help reduce customer bills, but Pepco states that customer use of the Smart Energy Services platform "will drive sustained value by improving reliability, customer satisfaction, lowering customer bills and decreasing operational cost."[40] In addition, facilitating customers' ability to share their usage data with energy service and DER providers can help to promote energy efficiency and adoption of distributed solar, battery storage, or other technologies that provide benefits to the grid.

Q. Please describe your first metric: "Smart Energy Services Views".

A. As described by Pepco, the Smart Energy Services platform is an analytic-based solution that allows "customers to understand their energy consumption footprint and explore options to reduce that consumption and their energy bills." For example, the Smart Energy Services platform enables customers to view:

[40] Direct Testimony of Pepco Witness Barnett, Schedule (PSB)-1, Case No. 9655, October 26, 2020, p. 69.

- Bill projections, based on their current usage;
- Hourly energy usage;
- A breakdown of how their house uses energy; and
- Targeted energy tips based on their home.[41]

This proposed metric would track unique customer visits to this page per year, thereby encouraging Pepco to increase customer awareness and usage of this functionality, for which customers are paying millions of dollars.

Q. How much does Pepco expect to spend on the Smart Energy Services platform during the MYP?

A. Pepco forecasts that it will spend $8.5 million on enhancements to the Smart Energy Services platform in 2022.

Q. Does Pepco currently track how many customers access the Smart Energy Services platform?

A. Yes. Pepco reports that in 2019, there were 190,225 unique customer views of Smart Energy Services content on pepco.com.[42]

[41] Response to OPC 4-12.
[42] Response to OPC 4-12.

Q. Please describe your metric "Customers with Access to Green Button Connect My Data."

A. As described by the US Department of Energy, Green Button Connect My Data "allows utility customers to automate the secure transfer of their own energy usage data to authorized third parties, based on affirmative (opt-in) customer consent and control."[43]

This metric would track the percentage of customers, by rate class, with access to Green Button Connect My Data functionality.

Q. Do customers automatically have access to this functionality?

A. No, this functionality is not automatically provided to customers. Pepco states that it sets up accounts for any commercial customers who request it.[44]

Q. Why do you believe that tracking the percentage of customers who have access to Green Button Connect My Data is needed?

A. Pepco states that "[t]here have been no proactive customer marketing efforts to promote the Connect My Data functionality."[45] I am concerned that Pepco has no incentive to make customers aware of this functionality, which will impede customers' usage of the functionality and thus customers' ability to share their usage data with energy service and DER providers.

[43] US Department of Energy, Energy.gov, Green Button. Available at https://www.energy.gov/data/green-button
[44] Response to OPC 4-12.
[45] *Id.*

VIII. CONCLUSIONS AND RECOMMENDATIONS

Q. Please summarize your main conclusions.

A. My conclusions are as follows:

- Pepco's proposed investment plan represents the continuation of a pattern that has resulted in the Company having exceptionally high gross rate base on a per-customer basis. The low risk of disallowance and rapid rate of cost recovery under the MYP construct exacerbates the incentive that Pepco has to over-invest in its system. For these reasons, additional measures are needed to enhance customer welfare.

- Tracking metrics can serve as a valuable tool to increase transparency, determine future performance standards, assess the need and magnitude of future financial rewards or penalties, and gather data to enable a benefit-cost analysis of any proposed PIM. While I do not oppose the tracking of the data that Pepco has proposed, several of the metrics are redundant, or would not provide useful information to inform future PIMs.

- Pepco's proposed tracking metrics are largely inappropriate for full PIMs with financial incentives. The metrics are in many cases redundant and would reward Pepco for activities that it is already committed to undertaking or could easily achieve. In particular, the reliability metrics should not be developed into PIMs, as Pepco is already subject to reliability standards and has provided no information regarding the costs and benefits to customers of incremental reliability improvements.

In sum, Pepco's proposed PIMs do little to better align Pepco's incentives with the public interest.

Q. Please summarize your recommendations.

A. I offer the following recommendations:

1. The Commission should require Maryland utilities to conduct integrated distribution planning to enhance transparency and facilitate the determination of whether investments included in MYPs are cost-effective relative to alternatives. To accomplish this, I recommend that the Commission initiate a proceeding to develop these requirements as soon as feasible. Approval of future MYPs should be predicated on the filing and approval of integrated distribution plans.

2. The Commission should reject Pepco's proposed PIMs and instead consider metrics and incentives to encourage Pepco to (a) explore cost-effective NWAs, and (b) empower customers to access and engage with their electricity usage data.

Q. Does this conclude your testimony?

A. Yes, it does.

Melissa Whited, Principal Associate

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PROFESSIONAL EXPERIENCE

Synapse Energy Economics, Cambridge MA. *Principal Associate,* 2017 – present*, Senior Associate,* 2015 – 2017*, Associate*, 2012 – 2015

Consult and provide analysis of rate design proposals, alternative regulation, and other topics including distributed energy resources and electric vehicles. Develop expert witness testimony in public utility commission proceedings. Author reports on topics at the intersection of utility regulation, customer protection, and environmental impacts.

University of Wisconsin - Madison, Department of Agricultural and Applied Economics, Madison, WI. *Teaching Assistant – Environmental Economics*, 2011 – 2012

Developed teaching materials and led discussions on cost-benefit analysis, carbon taxes and cap-and-trade programs, management of renewable and non-renewable resources, and other topics.

Public Service Commission of Wisconsin, Water Division, Madison, WI. *Program and Policy Analyst - Intern*, Summer 2009

Researched water conservation programs nationwide to develop a proposal for Wisconsin's state conservation program. Developed spreadsheet model to calculate avoided costs of water conservation in terms of energy savings and avoided emissions.

Synapse Energy Economics, Cambridge, MA. *Communications Manager*, 2005 – 2008

Developed technical proposals for state and federal agencies, environmental and public interest groups, and businesses. Edited reports on energy efficiency, integrated resource planning, greenhouse gas regulations, renewable resources, and other topics.

EDUCATION

University of Wisconsin, Madison, WI
Master of Arts in Agricultural and Applied Economics, 2012
Certificate in Energy Analysis and Policy
National Science Foundation Fellow

University of Wisconsin, Madison, WI
Master of Science in Environment and Resources, 2010
Certificate in Humans and the Global Environment (CHANGE)
Nelson Distinguished Fellowship

Southwestern University, Georgetown, TX
Bachelor of Arts in International Studies, *Magna cum laude,* 2003.

ADDITIONAL SKILLS

- Econometric Modeling – Linear and nonlinear modeling including time-series, panel data, logit, probit, and discrete choice regression analysis
- Nonmarket Valuation Methods for Environmental Goods – Hedonic valuation, travel cost method, and contingent valuation
- Cost-Benefit Analysis
- Input-Output Modeling for Regional Economic Analysis

FELLOWSHIPS AND AWARDS

- Winner, M. Jarvin Emerson Student Paper Competition, Journal of Regional Analysis and Policy, 2010
- Fellowship, National Science Foundation Integrative Graduate Education and Research Traineeship (IGERT), University of Wisconsin – Madison, 2009
- Nelson Distinguished Fellowship, University of Wisconsin – Madison, 2008

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TESTIMONY

Maine Public Utilities Commission (Docket No. 2018-00171): Direct testimony of Melissa Whited regarding utility incentives for non-wires alternatives. On behalf of Maine Office of the Public Advocate. December 17, 2018.

Rhode Island Public Utilities Commission (Docket No. 4780): Direct testimony of Tim Woolf and Melissa Whited regarding National Grid's Power Sector Transformation proposals. On behalf of the Rhode Island Division of Public Utilities and Carriers. April 28, 2018.

Rhode Island Public Utilities Commission (Docket No. 4770): Direct testimony of Tim Woolf and Melissa Whited regarding National Grid's proposed performance incentive mechanisms, benefit-cost analyses, and request for recovery of costs for its Advanced Metering Functionality study and distributed energy resources enablement investments. On behalf of the Rhode Island Division of Public Utilities and Carriers. April 6, 2018.

Rhode Island Public Utilities Commission (Docket No. 4783): Direct testimony of Tim Woolf and Melissa Whited regarding National Grid's Advanced Metering Functionality Pilot. On behalf of the Rhode Island Division of Public Utilities and Carriers. February 22, 2018.

Virginia State Corporation Commission (Case No. PUR-2017-00044): Direct testimony of Melissa Whited regarding Rappahannock Electric Cooperative's proposed increases to fixed charges for residential customers and small business customers. On behalf of Sierra Club. September 19, 2017.

California Public Utilities Commission (Application 17-01-020, 17-01-021, and 17-01-022): Joint opening testimony with Max Baumhefner and Katherine Stainken on fast charging infrastructure and rates; joint opening testimony with Max Baumhefner and Joel Espino on medium and heavy-duty and fleet charging infrastructure and commercial EV rates; joint opening testimony with Max Baumhefner and Chris King on residential charging infrastructure and rates. Rebuttal testimony on public fast charging rate design, commercial EV rate design, and residential EV rate design. On behalf of Natural Resources Defense Council, the Greenlining Institute, Plug In America, the Coalition of California Utility Employees, Sierra Club, and the Environmental Defense Fund. July 25, August 1, August 7, and September 5, 2017.

New York Public Service Commission (Case 17-E-0238): Direct and rebuttal testimony of Tim Woolf and Melissa Whited regarding Earnings Adjustment Mechanisms proposed by National Grid. On behalf of Advanced Energy Economy Institute. August 25 and September 15, 2017.

Utah Public Service Commission (Docket No. 14-035-114): Direct testimony of Melissa Whited regarding Pacificorp's proposed rates for customers with distributed generation. On behalf of Utah Clean Energy. June 8, 2017.

Texas Public Utilities Commission (SOAH Docket No. 473-17-1764, PUC Docket No. 46449): Cross-rebuttal testimony evaluating Southwestern Electric Power Company's proposed revisions to its Distributed Renewable Generation tariff. On behalf of Sierra Club and Dr. Lawrence Brough. May 19, 2017.

Massachusetts Department of Public Utilities (Docket No. 17-05): Direct and surrebuttal testimony of Tim Woolf and Melissa Whited regarding performance-based regulation, the monthly minimum reliability contribution, storage pilots, and rate design in Eversource's petition for approval of rate increases and a performance-based ratemaking mechanism. On behalf of Sunrun and the Energy Freedom Coalition of America, LLC. April 28, 2017 and May 26, 2017.

Public Utilities Commission of Hawaii (Docket No. 2015-0170): Direct testimony regarding Hawaiian Electric Light Company's proposed performance incentive mechanisms. On behalf of the Division of Consumer Advocacy. April 28, 2017.

Massachusetts Department of Public Utilities (Docket No. 15-155): Joint direct and rebuttal testimony with T. Woolf regarding National Grid's rate design proposal. On behalf of Energy Freedom Coalition of America, LLC. March 18, 2016 and April 28, 2016.

Federal Energy Regulatory Commission (Docket No. EC13-93-000): Affidavit regarding potential market power resulting from the acquisition of Ameren generation by Dynegy. On behalf of Sierra Club. August 16, 2013.

Wisconsin Senate Committee on Clean Energy: Joint testimony with M. Grabow regarding the importance of clean transportation to Wisconsin's public health and economy. February 2010.

TESTIMONY ASSISTANCE

Colorado Public Utilities Commission (Proceeding No. 16AL-0048E): Answer testimony of Tim Woolf regarding Public Service Company of Colorado's rate design proposal. On behalf of Energy Outreach Colorado. June 6, 2016.

Nevada Public Utilities Commission (Docket Nos. 15-07041 and 15-07042): Direct testimony on NV Energy's application for approval of a cost of service study and net metering tariffs. On behalf of The Alliance for Solar Choice. October 27, 2015.

Missouri Public Service Commission (Case No. ER-2014-0370): Direct and surrebuttal testimony on the topic of Kansas City Power and Light's rate design proposal. On behalf of Sierra Club. April 16, 2015 and June 5, 2015.

Wisconsin Public Service Commission (Docket No. 05-UR-107): Direct and surrebuttal testimony of Rick Hornby regarding Wisconsin Electric Power Company rate case. On behalf of The Alliance for Solar Choice. August 28, 2014 and September 22, 2014.

Maine Public Utilities Commission (Docket No. 2013-00519): Direct testimony of Richard Hornby and Martin R. Cohen on GridSolar's smart grid coordinator petition. On behalf of the Maine Office of the Public Advocate. August 28, 2014.

Maine Public Utilities Commission (Docket No. 2013-00168): Direct and surrebuttal testimony of Tim Woolf regarding Central Maine Power's request for an alternative rate plan. December 12, 2013 and March 21, 2014.

Massachusetts Department of Public Utilities (Docket No. 14-04): Comments of Massachusetts Department of Energy Resources on investigation into time varying rates. On behalf of the Massachusetts Department of Energy Resources. March 10, 2014.

State of Nevada, Public Utilities Commission of Nevada (Docket No. 13-07021): Direct testimony of Frank Ackerman regarding the proposed merger of NV Energy, Inc. and MidAmerican Energy Holdings Company. On behalf of the Sierra Club. October 24, 2013.

PRESENTATIONS

Whited, M. 2021. "Evolution of Net Metering in Hawaii." Presentation to the NARUC Winter Policy Summit. February 4.

Biewald, B., M. Whited. "Evaluating and Shaping the Impacts of EVs on Customers: Tools for Consumer Advocates." Presentation at the NASUCA Mid-Year Meeting, June 19, 2019.

Whited, M. 2019. "Performance Incentive Mechanisms." Presentation to the 2019 Pennsylvania Public Utility Law Conference, Harrisburg, PA. May 31.

Whited, M. 2018. "Smart Non-Residential Rate Design: Designing for the Future." Presentation to the NARUC Annual Meeting, Orlando, FL. November 11.

Whited, M. 2016. "Energy Policy for the Future: Trends and Overview." Presentation to the National Conference of State Legislators' Capitol Forum, Washington, DC, December 8.

Whited, M. 2016. "Ratemaking for the Future: Trends and Considerations." Presentation to the Midwest Governors' Association, St. Paul, MN, July 14.

Whited, M. 2016. "Performance Based Regulation." Presentation to the NARUC Rate Design Subcommittee. September 12.

Whited, M. 2016. “Demand Charges: Impacts and Alternatives (A Skeptic’s View).” EUCI 2nd Annual Residential Demand Charges Summit, Phoenix, AZ, June 7.

Whited, M. 2016. “Performance Incentive Mechanisms.” Presentation to the National Governors Association, Wisconsin Workshop, Madison WI, March 29.

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Whited, M. 2015. “Performance Incentive Mechanisms.” Presentation to the National Governors Association, Learning Lab on New Utility Business Models & the Electricity Market Structures of the Future, Boston, MA, July 28.

Whited, M. 2015. “Rate Design: Options for Addressing NEM Impacts.” Presentation to the Utah Net Energy Metering Workgroup, Workshop 4, Salt Lake City, UT, July 8.

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Whited, M., M. Grabow, M. Hahn. 2009. “Valuing Bicycling’s Economic and Health Impacts in Wisconsin.” Presentation before the Governor’s Coordinating Council on Bicycling, December.

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