BEFORE THE

PUBLIC SERVICE COMMISSION OF MARYLAND

IN THE MATTER OF THE APPLICATION OF POTOMAC ELECTRIC POWER COMPANY FOR AN ELECTRIC MULTI-YEAR PLAN	)	Case No. 9655

Surrebuttal Testimony of

Courtney Lane

On Behalf of

Office of People's Counsel

April 20, 2021

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I. INTRODUCTION AND QUALIFICATIONS

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

A. My name is Courtney Lane. I am a Senior Associate at Synapse Energy Economics, located at 485 Massachusetts Avenue, Cambridge, MA 02139.

Q. Have you previously submitted testimony in this proceeding?

A. Yes. I submitted direct testimony in this proceeding on March 3, 2021, on behalf of the Office of People's Counsel (OPC).

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of my surrebuttal testimony is to respond to Mark Warner's rebuttal testimony submitted on behalf of Potomac Electric Power Company ("Pepco" or the "Company"). My surrebuttal testimony rebuts several key aspects of Mr. Warner's testimony but does not attempt to address every instance of disagreement. Thus, silence on any particular issue should not be interpreted as agreement.

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

A. In addition to Mr. Warner's testimony, the sources for my testimony are public documents, as well as my professional knowledge and experience.

Q. Did you prepare or direct the preparation of this testimony?

A. Yes.

II. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Q. Please summarize your primary conclusions regarding Witness Warner's rebuttal testimony.

A. Witness Warner does not sufficiently address the concerns I raise related to his flawed methodology in assessing the cost-effectiveness of Pepco's electric vehicle (EV) program offerings.

Witness Warner argues that my criticisms are a result of having a different objective and therefore a different approach to conducting a benefit-cost assessment (BCA). This is not the case. I still find that regardless of his objective or perspective, Witness Warner's methods are flawed and do not adhere to best practices as included in the *National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources* (NSPM for DERs)[1] or within the New York State Energy Research and Development Authority (NYSERDA) EV BCA, or within the California Transportation Electrification Assessment, which he cites in his rebuttal testimony.[2]

For example, environmental impacts are included in his ratepayer impact measure (RIM) test when they are not monetized in rates. Further, changes to utility revenues are included in the market-wide societal cost test (SCT) when they should not be. Lastly, Witness

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[1] National Efficiency Screening Project (NESP), *National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources* (NSPM for DERs), Aug. 2020. Available at: https://www.nationalenergyscreeningproject.org/wp-content/uploads/2020/08/NSPM-DERs_08-04-2020_Final.pdf.

[2] New York State Energy Research and Development Authority (NYSERDA) Report Number 19-07 and Energy and Environmental Economics, Inc. 2014. California Transportation Electrification Assessment, Phase 2: Grid Impacts.

Warner's use of multiple cost-effectiveness tests does not provide added value and is contrary to the way multiple cost-effectiveness tests are applied to EV BCAs in other jurisdictions like New York and California, as well as to the EmPOWER programs in Maryland.[3]

I also find that Witness Warner's BCA approach does not provide the Commission with an accurate view of either the cost-effectiveness or rate impacts of Pepco's EV programs due to its inclusion of utility revenue impacts.

Q. Please summarize your recommendations.

A. Many of the issues I raise in this proceeding and in Case No. 9645 are being considered by the PC44 Electric Vehicle Work Group (EV Work Group) as part of its task to develop a consensus benefit-cost approach and methodology. However, significant flaws in Witness Warner's BCA methodology should be addressed in this docket.

I therefore recommend that Witness Warner's methodology not set precedent for future BCAs of EV programs in Maryland.

The other recommendations from my direct testimony remain unchanged. These include a request for the Commission to:

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[3] NYSERDA. 2019. Benefit-Cost Analysis of Electric Vehicle Deployment in New York State. NYSERDA Report Number 19-07. Prepared by E3, ICF, and MJ Bradley at S-2 and S-3.

Energy and Environmental Economics, Inc. 2014. California Transportation Electrification Assessment, Phase 2: Grid Impacts at 48.

Potomac Electric Power Company 2018-2020 EmPOWER MD Program Filing (Case No. 9155).

1. Require Pepco to provide a justification of the costs related to Company-owned EV chargers as part of its consolidated reconciliation and final reconciliation as proposed in its Multi-Year Plan (MYP) filing. This should include a summary of revenues received from Company-owned chargers, how revenues were returned to customers, and the cost of the program.

2. Require Pepco to conduct a rate and bill impacts analysis for each customer rate class at the end of the five-year pilot period to assess the overall ratepayer impacts from its portfolio of EV offerings. This analysis should account for actual revenues received from Company-owned chargers, the impact of increased distribution revenues from EV charging due to the Company's programs, and how these revenues were allocated to each customer class.

III. RESPONSE TO PEPCO WITNESS WARNER

Guidance on Benefit-Cost Assessments of EVs

Q. Do you consider the NSPM for DERs to be the only resource for developing an EV BCA methodology?

A. Contrary to Witness Warner's claim on page 6 of his rebuttal testimony, I do not consider the NSPM for DERs to be the only resource. As indicated in my direct testimony, I use the NSPM as a guidepost because it provides an "objective, policy- and technology-neutral, and economically sound guidance" for developing and modifying cost-effectiveness tests for DERs.[4] Further, the NSPM has been vetted by a cross-cutting advisory group consisting

[4] Direct Testimony of Courtney Lane at 9.

of regulators, state agencies, utilities, expert consultants, and representatives from the DER and EV industries.

Q. On pages 6 and 7 of his rebuttal testimony, Witness Warner cites several sources he claims offer very different approaches to your recommended BCA approach. Have you reviewed these sources?

A. Yes.

Q. What do you conclude from your review of these sources?

A. I disagree with Witness Warner's conclusion that these sources take a "very different approach to EV assessment" than the NSPM for DERs and my recommendations. As summarized below, I find that these sources align with portions of the NSPM for DERs and the recommendations put forth in my direct testimony. These sources also differ with several aspects of Witness Warner's BCA methodology.

1. New York State Energy Research and Development Authority: The EV BCA prepared for NYSERDA (NYSERDA BCA), aligns with the NSPM for DERs and my recommendation that increased utility revenues should not be included in an SCT. The impact of utility revenues is only included in the ratepayer impact measure (RIM) test. This is counter to Witness Warner's BCA, which includes the impact of changes in utility revenues in his market-wide SCT. Further, the NYSERDA BCA aligns with my recommendation that multiple cost-effectiveness tests should be applied to the same case.[5] The NYSERDA BCA applies three cost-effectiveness tests to each EV adoption and

[5] Direct Testimony of Courtney Lane, at 26-27.

charging case: (1) the SCT, (2) the participant cost test (PCT), and (3) the RIM test.[6] This is contrary to Mr. Warner's methodology that applies different cost-effectiveness tests to different use cases. Mr. Warner used the SCT for the market-wide case and a ratepayer perspective test for individual program offerings.

2. California Transportation Electrification Assessment: Like the NYSERDA BCA, the California assessment does not count increased utility revenues in the SCT. The impact of utility revenues is only included in the RIM test.[7] Further, this assessment also applies the same method of using multiple cost-effectiveness tests to the same case. This aligns with my recommendations.

Use of Utility Revenues in BCAs

Q. What justification does Witness Warner use for including rate impacts within his BCA?

A. Witness Warner states that the inclusion of rate impacts in a BCA is an approach "consistent with the way potential ratepayer impacts have been evaluated in numerous other energy efficiency filings" and he considers those energy efficiency filings "a reasonable precedent for making a similar determination in the case of EV programs."[8] He further indicates that rate impacts should be included because one of the largest impacts of EV adoption is downward pressure on rates.[9]

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[6] NYSERDA Report Number 19-07, at S-2 and S-3.

[7] Energy and Environmental Economics, Inc. 2014. *California Transportation Electrification Assessment, Phase 2: Grid Impacts* at 54.

[8] Rebuttal Testimony of Mark Warner at 8.

[9] *Id.* at 4.

Q. Do you agree with this justification?

A. No. Contrary to Witness Warner's assertion, it is not common for energy efficiency filings to include ratepayer impacts within a BCA. The most common primary measurement of energy efficiency cost-effectiveness is the total resource cost (TRC) test, followed closely by the SCT.[10] In fact, the primary test used to assess the cost-effectiveness of Maryland's EmPOWER energy efficiency programs is the TRC.[11] These tests do not account for lost revenues or any changes to revenues. Moreover, including rate impacts in a BCA for one utility investment and not another violates Principle 1 of the NSPM for DERs. It is important for there to be consistent treatment and application of cost-effectiveness principles, methodologies, and assumptions across utility programs to allow for comparisons across investment choices.

Further, just because an impact is "one of the largest" does not justify its inclusion in a BCA. This type of rationale can lead to bias across resources and investment choices. The decision of whether to include an impact in a BCA should be based on a transparent cost-effectiveness framework that ensures proper accounting of the full range of utility system impacts and reflect the jurisdiction's applicable policy goals.

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[10] National Action Plan for Energy Efficiency (2008). *Understanding Cost-Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy Makers*. Energy and Environmental Economics, Inc. and Regulatory Assistance Project. Available at: www.epa.gov/eeactionplan.

[11] EmPOWER Maryland 2018 Evaluation Report Cost-Effectiveness Results for 2018 Energy Efficiency Programs at 1.

Q. Witness Warner states your recommendation to examine rate and bill impacts at the end of the pilot would leave Pepco and the Commission without insight on the impact the utility EV programs have on non-participating customers at this time. Do you agree with his conclusion?

A. No, I do not. The Commission is specifically requesting a benefit-cost assessment. My recommendation for a jurisdiction-specific cost-effectiveness test, the Maryland Cost-Effectiveness Test (MD Test), would provide a more comprehensive view of all the costs and benefits resulting directly from Pepco's EV programs in contrast to Witness Warner's narrowly focused offer-specific merit tests. In addition to providing utility system impacts, participant impacts, and environmental impacts, the MD Test provides the Commission with information on the impact to non-participating customers.

All customers, regardless of whether they participate in Pepco's EV programs, pay for utility system costs. As described in my direct testimony, the proposed MD Test accounts for all utility system impacts that will be borne by participants and non-participants. These impacts include changes to transmission and distribution costs, wholesale market price effects, generation costs, RPS compliance costs, and Pepco's program costs. Similarly, participants and non-participants will benefit from the environmental impacts of Pepco's EV programs.

If other cost-effectiveness perspectives are warranted at this time, a RIM test could be used as a secondary test. However, to accurately assess cost-effectiveness from the ratepayer perspective, non-monetized environmental benefits should be removed as they are not currently monetized in rates. This is an important distinction, as excluding these benefits changes Witness Warner's BCA results. For example, if the environmental benefits are

removed from Pepco Offering 4: Commercial MUD, the resulting benefit-cost ratio is lowered from 1.02 down to 0.37, indicating that ratepayers are worse off from this program. Similarly, the benefit-cost ratio for Offering 5: Public Charging is reduced from 1.09 to 0.61 and the benefit-cost ratio for the EV portfolio as a whole is reduced from 1.09 to 0.64.

Q. Witness Warner states that your critique of his approach to conducting a BCA is not valid because he has different objectives. Do you agree?

A. No. Witness Warner indicates on page 4 of his rebuttal testimony that his BCA was meant to "provide the Commission with quantified insight on two questions: a) the net benefit of vehicle electrification overall as seen by society as a whole, and b) an estimate of likely ratepayer impacts."[12] Whether or not I agree with these objectives is secondary to the fact that I disagree with the approach. The approach used by Witness Warner does not accurately achieve his objectives. Witness Warner's approach to estimating likely ratepayer impacts conflates rate impacts and societal impacts (environmental) and consequently does not provide useful information on either. Similarly, his market-wide SCT includes changes to utility revenues. It is not appropriate or common practice to include utility revenues in an SCT. As noted above, the NSPM for DERs does not support the inclusion of rate impacts, and in addition, the NYSERDA BCA and the California assessment do not count utility revenues in the SCT.

[12] Rebuttal Testimony of Mark Warner at 4.

Use of Multiple Cost-Effectiveness Tests

Q. Does Witness Warner accurately capture your concern with his use of two different cost-effectiveness tests?

A. No. Contrary to what Witness Warner indicates on page 9 of his rebuttal testimony, I understand that he is providing "two completely different tests to address two completely different questions,"[13] and therein lies the issue.

Q. Please explain your concern with Witness Warner's use of multiple cost-effectiveness tests.

A. In Order No. 88997, the Commission noted the challenges with identifying an appropriate benefit-cost test and indicated a combination of tests may yield more successful results than any single approach.[14] However, Witness Warner does not use a combination of tests to assess Pepco's EV programs. He instead uses one test to assess Pepco's EV programs and a second test to assess the overall market-wide impact of increased EVs in Maryland. This does little to enhance the understanding of Pepco's EV program impacts because it does not allow for a comparison across the different offerings or the different tests.

This is not common practice when it comes to assessing the cost-effectiveness of EV programs. It is far more common to see several types of cost-effectiveness tests conducted for the same case or cases. In fact, the two frameworks Witness Warner cites, the NYSERDA EV BCA and the California Transportation Electrification Assessment, take this approach. The NYSERDA BCA applies three cost-effectiveness tests: SCT, PCT, and

[13] Rebuttal Testimony of Mark Warner at 9.

[14] Case No. 9478, Order No. 88997 at 43.

RIM test, to each EV adoption and charging case.[15] Likewise, the California assessment test applies the TRC, SCT, and RIM test to each specific EV case.[16] Further, this approach was used by Pepco in its 2018–2020 EmPOWER MD Programs, where programs were assessed using the TRC test as the primary test, but results were also shown using the utility cost test (UCT), PCT, RIM, and SCT.[17] These examples are all contrary to Mr. Warner's methodology that applies different cost-effectiveness tests to different use cases.

Q. What is your recommendation for the use of multiple cost-effectiveness tests?

A. As indicated in my direct testimony, I recommend that the MD Test be used as the primary cost-effectiveness test to assess Pepco's EV offerings at the program and portfolio level. Then if further tests are warranted to enhance the overall understanding of EV program impacts, secondary tests like the RIM test could be applied to show BCA results from a different perspective.

Q. Does this conclude your testimony?

A. Yes, it does.

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[15] NYSERDA Report Number 19-07, at S-2 and S-3.

[16] Energy and Environmental Economics, Inc. 2014. *California Transportation Electrification Assessment, Phase 2: Grid Impacts* at 48.

[17] Potomac Electric Power Company 2018-2020 EmPOWER MD Program Filing (Case No. 9155).