

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION  
  
REBUTTAL TESTIMONY OF

**DANITA PARK**

ON BEHALF OF THE  
RETAIL ENERGY SUPPLY ASSOCIATION  
AND NRG ENERGY, INC.

Docket No. R-2021-3024601

PECO Energy Company – Electric Division  
2021 Base Rate Proceeding

TOPICS:

Electric Vehicle Charging Pilot Proposal  
Electric Vehicle DCFC Pilot Rider

July 22, 2021

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1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME.**

3 A. Danita Park.

4 **Q. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY IN THIS PROCEEDING?**

5 A. Yes. On June 28, 2021, I submitted direct testimony on behalf of the Retail Energy Supply  
6 Association (“RESA”) <sup>1</sup> and NRG Energy, Inc. (“NRG”) <sup>2</sup> marked as RESA/NRG  
7 Statement No. 1. The direct testimony was accompanied by ten (10) exhibits marked as  
8 Exhibit DP-1 through DP-10. The direct testimony was revised on July 9, 2021.

9 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

10 A. The purpose of my rebuttal testimony is to respond to the testimony of certain parties who  
11 submitted direct testimony in this proceeding. My rebuttal testimony addresses issues  
12 regarding PECO Energy Company – Electric Division’s (“PECO” or “Company”)  
13 proposed Electric Vehicle Charging Pilot and its proposal to expand the Electric Vehicle  
14 DCFC Pilot Rider (EV-FC) to include public transit. In addressing the Company’s  
15 proposed EV Charging Pilot and proposal to expand the Electric Vehicle DCFC Pilot  
16 Rider, I will discuss the Direct Testimony: (1) on behalf of the Office of Consumer  
17 Advocate (“OCA”) by Ron Nelson (OCA Statement No. 6); (2) on behalf of the Office of

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<sup>1</sup> The comments expressed in this filing represent the position of the Retail Energy Supply Association (“RESA”) as an organization but may not represent the views of any particular member of the Association. Founded in 1990, RESA is a broad and diverse group of retail energy suppliers dedicated to promoting efficient, sustainable and customer-oriented competitive retail energy markets. RESA members operate throughout the United States delivering value-added electricity and natural gas service at retail to residential, commercial and industrial energy customers. More information on RESA can be found at [www.resausa.org](http://www.resausa.org).

<sup>2</sup> NRG’s license retail supply companies include: Reliant Energy Northeast LLC d/b/a NRG Home/NRG Business A-2010-2192350; Green Mountain Energy Company A-2011-2229050; Energy Plus Holdings LLC A-2009-2139745; XOOM Energy New Jersey, LLC A-2012-2283821; Stream Energy New Jersey, LLC A-2010-2181867; Direct Energy Services, LLC A-110164; Direct Energy Business, LLC A-110025; Direct Energy Business Marketing, LLC A-2013-2368464; and Gateway Energy Services Corporation A-2009-2137275.

1 Small Business Advocate (“OSBA”) by Brian Kalcic (OSBA Statement No. 1); (3) on  
2 behalf of the Tenant Union Representative Network (“TURN”) and Coalition for  
3 Affordable Utility Services and Energy Efficiency in Pennsylvania (“CAUSE-PA”) by  
4 Harry Geller (TURN and CAUSE-PA Statement No. 1); (4) on behalf of the Clean Energy  
5 Advocates (“CEA”) by Karl Rábago and Kathleen Harris (Clean Energy Advocates  
6 Statements Nos. 1 and 2); and (5) on behalf of ChargePoint, Inc. (“ChargePoint”) by  
7 Matthew Deal (ChargePoint Statement No. 1). If I do not address each and every issue or  
8 argument in the testimony of a witness, it does not imply agreement with those issues or  
9 arguments.

10 **Q. ARE YOU SPONSORING ANY EXHIBITS?**

11 A. Yes. The exhibits enclosed with my rebuttal testimony include various discovery responses  
12 served in this proceeding.

13 **Q. ASIDE FROM RESA/NRG, DID ANY OTHER PARTY OPPOSE PECO’S**  
14 **PROPOSED EV CHARGING PILOT?**

15 A. Yes. The OSBA also opposed PECO’s proposed EV Charging Pilot. (OSBA Statement  
16 No. 1 at 14). In explaining OSBA’s opposition to the EV Charging Pilot, Witness Kalcic  
17 stated that “the fact that PECO’s proposed EV-Pilot would be ratepayer funded would  
18 disadvantage private developers that do not receive a ratepayer funded incentive to build  
19 EV charging stations in PECO’s service territory.” (OSBA Statement No. 1 at 15).  
20 Witness Kalcic expressed that ratepayers should not be in the business of subsidizing the  
21 deployment of EV charging stations. (OSBA Statement No. 1 at 15). TURN and CAUSE-  
22 PA Witness Geller expressed opposition to a component of PECO’s EV Charging Pilot –  
23 the Commercial and Industrial Level 2 Charging Program (“L2 Program”). Witness Geller

1 opined that the L2 Program is premature and “could lead to the displacement of low income  
2 communities and communities of color.” (TURN and CAUSE-PA Statement No. 1 at 62).

3 **Q. DID ANY OF THE PARTIES TO THIS PROCEEDING RECOMMEND**  
4 **MODIFICATIONS TO PECO’S PROPOSED EV CHARGING PILOT?**

5 A. Yes. A discussion of those modifications, as well as general comments regarding PECO’s  
6 proposal follows.

7 **II. RESPONSE TO GENERAL COMMENTS MADE IN THE DIRECT TESTIMONY**  
8 **OF OTHER PARTIES REGARDING TRANSPORTATION ELECTRIFICATION**

9 **Q. THE CLEAN ENERGY ADVOCATES CLAIM THAT REGULATED ELECTRIC**  
10 **UTILITIES ARE “WELL-SUITED TO PLAY A KEY ROLE IN EV**  
11 **INFRASTRUCTURE BUILDOUT.” (CEA STATEMENT NO. 2 AT 3-5). DO YOU**  
12 **AGREE?**

13 A. No. I do not believe that captive ratepayers of regulated utilities should bear the risk of  
14 utility investment in a market that is already benefiting from investment by numerous  
15 private companies. Ratepayer subsidization of EV charging station development is  
16 unnecessary. Electric utilities are not well-positioned to conduct education and outreach  
17 as they may not understand the dynamics of the EV market or be a reliable educator.

18 **Q. CEA’S WITNESS HARRIS VIEWS THE LARGEST BARRIER TO EV**  
19 **ADOPTION AS THE CONCERN OF EV OPERATORS AND POTENTIAL EV**  
20 **OPERATORS ABOUT ADEQUATE ACCESS TO EV CHARGING. (CEA**  
21 **STATEMENT NO. 2 AT 15). DO YOU AGREE WITH HER ASSESSMENT?**

22 A. I agree that concern about access to EV charging is perceived to be a barrier to EV adoption.  
23 However, I believe that the public has deep misconceptions regarding access to EV  
24 charging infrastructure.

1 **Q. WITNESS HARRIS PROVIDED ESTIMATES REGARDING THE NUMBER OF**  
2 **CHARGING STATIONS NEEDED IN PECO’S SERVICE TERRITORY IN THE**  
3 **NEXT DECADE TO SUPPORT PASSENGER VEHICLES. (CEA STATEMENT**  
4 **NO. 2 AT 15–16). DO YOU AGREE WITH HER ASSESSMENT?**

5 A. No. Witness Harris’ assessment does not reflect the known market dynamics, fails to  
6 acknowledge the current over build, and fails to provide support for the implied assumption  
7 that the competitive market has not/will not deliver the infrastructure required.  
8 Furthermore, Harris fails to acknowledge that the existing 429 DC fast charging stations  
9 can adequately support material growth for many years because the system is overbuilt.  
10 As detailed below, Harris’s assessment of DC Fast charging need in 2030 is inaccurate and  
11 should be dismissed.

12 **Q. WERE YOU ABLE TO REPLICATE THE RESULTS OF WITNESS HARRIS**  
13 **GIVEN THE MODEL AND ASSUMPTIONS PROVIDED?**

14 A. Yes. Witness Harris provided a link to the U.S. Department of Energy model and noted her  
15 assumptions. I accessed the model on July 20, 2021, input the assumptions as described in  
16 her testimony and confirmed the scenario output.

17 **Q. WHAT ASSUMPTIONS DID CEA WITNESS HARRIS APPLY?**

18 A. Witness Harris uses 226,500 electric vehicles as the estimated number of electric vehicles  
19 by 2030 and notes that this number could reflect approximately 10% of vehicles in the area.  
20 (CEA Statement No. 2 at Page 16, n. 39). She also adjusted an input – the number of  
21 drivers with home charging from 100% to 70%. Both assumptions appear reasonable.  
22 However, Witness Harris made no adjustment to the next four inputs: (1) 15% plug-in EVs  
23 with a range of 20 miles; (2) 35% plug-in EVs with a range of 50 miles; (3) 15% all electric  
24 with a range of 100 miles; and (4) 35% all-electric with a range of 250 miles. These  
25 percentages are pre-populated in the U.S. Department of Energy model. Witness Harris  
26 made no supporting claims for these numbers or the validity of these estimates for 2030.

1 **Q. DID HARRIS CORRECTLY ADJUST THE SCENARIO FOR 2030?**

2 A. No. The assumed electric vehicle mix by 2030 is expected to deviate materially and  
3 importantly from the pre-populated model assumptions. While Witness Harris recognizes  
4 and testifies (CEA Statement No. 2 at Page 14, lines 6–16) that new EVs are coming to  
5 market, she did not adjust the scenario to appropriately reflect the battery range of the  
6 vehicles that she testified will enter the market in the near future. Her testimony calls out  
7 important entrants like the Volkswagen ID.4,<sup>3</sup> Ford F-150 pickup truck, and the Ford  
8 Mustang Mach-E.<sup>4</sup> The Volkswagen ID.4 and Ford Mustang Mach-E are already  
9 commercially available, and they offer batteries in the 250-mile range. The Ford F-150  
10 pick-up truck has been announced but is not yet commercially available. Witness Harris  
11 further made no attempt to justify why the vehicle mix would remain at best stagnant in  
12 such a dynamic market. Simply put, as vehicle mile range increases, the need for DC fast  
13 charging declines.

14 **Q. WHAT RESULT DO YOU GET WHEN YOU APPLY A MORE REASONABLE**  
15 **SCENARIO FOR 2030?**

16 A. Correcting the vehicle make up<sup>5</sup> assumptions: (1) 0% plug in with a range of 20 miles; (2)  
17 20% plug-in range 50 miles; (3) 0% all electric 100 miles range; and (4) 80% all-electric  
18 250 miles range, results in a more accurate scenario of future public charging need by 2030.  
19 Under this scenario the future DC fast charging needs drops to 552 from 1,251. Harris

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<sup>3</sup> *Is the 2021 Volkswagen ID.4 Pro the New Range King Among Mainstream EVs?* Edmunds (June 15, 2021), <https://www.edmunds.com/car-news/tested-is-the-2021-volkswagen-id4-pro-the-new-range-king-among-mainstream-evs.html>

<sup>4</sup> *2021 Ford Mustang Mach-E*, Car and Driver, <https://www.caranddriver.com/ford/mustang-mach-e>

<sup>5</sup> Starting in 2017, all-electric models have outsold plug-in hybrids. As all-electric models with ranges in excess of 200 miles are available, customers are consistently choosing all-electric over Plug-in hybrids. An 80%: 20% split of all electric to plug in hybrids reflects current trends. *When the car you want is a rainbow – colored unicorn*, NRG (April 28, 2021), <https://www.nrg.com/insights/energy-education/when-the-car-you-want-is-a-rainbow-colored-unicorn.html>

1 estimates the current DC Fast charging to be 429 stations in the Philadelphia area. Nearly  
2 80% of the future fast charging need under this corrected scenario has already been  
3 installed. Witness Harris' claim that there will be insufficient DC Fast chargers by 2030  
4 is simply incorrect. The conclusion is based on stagnant vehicle mix assumptions and fails  
5 to include the realities of the new longer range vehicles. Witness Harris further fails to  
6 consider that there is ample time to plan, design, permit, and construct charging stations by  
7 2030. Consistent with my direct testimony, correcting the vehicle mix reinforces my belief  
8 that there is currently an overbuild of DC Fast charging today and the need for DC Fast  
9 charging will decline as battery range increases. There is no cause for alarm, there is no  
10 need to overinvest.

11 **Q. CEA'S WITNESS HARRIS COMPARES THE PROJECTED COST OF PECO'S**  
12 **PROPOSED EV CHARGING PILOT TO THE COST OF EV PROGRAMS OF**  
13 **UTILITIES IN OTHER JURISDICTIONS. (CEA STATEMENT NO. 2 AT 16-17).**  
14 **IS THE COST COMPARISON A USEFUL WAY TO COMPARE PROGRAMS?**

15 A. No. The other utility programs cited by Witness Harris vary by scope and program  
16 parameters and different jurisdictions have varying levels of EV adoption. A pure cost  
17 comparison is not a useful way to compare programs.

18 **Q. WITNESS HARRIS CLAIMS THAT THE PROPOSED EV CHARGING PILOT**  
19 **PROGRAM IS NOT ADEQUATE TO FULLY MEET THE NEEDS OF THE EV**  
20 **MARKET IN PECO'S SERVICE TERRITORY. (CEA STATEMENT NO. 2 AT**  
21 **17). DO YOU AGREE?**

22 A. No. In addition to above, and as indicated in my Direct Testimony, Level 2 charging is  
23 40% over built and DC Fast charging is nearly 600% over built in Pennsylvania.  
24 (RESA/NRG Statement No. 1 (REVISED) at 11). PECO's low EV adoption rate  
25 (approximately 2% of new vehicle sales were EVs in PECO's service territory in 2020),  
26 coupled with the competitive market's ability to meet customer needs, reflect that PECO's  
27 proposed EV Charging Pilot is not necessary or prudent. (RESA/NRG Statement No. 1



1 (REVISED) at 12). Witness Harris also does not take into consideration that mass transit  
2 ridership has been in decline for many years prior to the COVID-19 pandemic.<sup>6</sup> The  
3 pandemic has resulted in further decline in mass transit ridership. The significant changes  
4 in transportation demands should be considered when evaluating PECO's transportation  
5 electrification proposals.

6 **III. RESPONSE TO RECOMMENDATIONS OF OTHER PARTIES ON PECO'S**  
7 **PROPOSED TRANSIT CHARGING PROGRAM**

8 **Q. WHAT MODIFICATIONS TO PECO'S TRANSIT CHARGING PROGRAM DID**  
9 **CHARGEPOINT WITNESS DEAL RECOMMEND?**

10 A. ChargePoint Witness Matthew Deal recommended that the Commission direct PECO to  
11 eliminate its proposed requirement that each participating port have a capacity of 250 kW  
12 or greater. (ChargePoint Statement No. 1 at 7). ChargePoint explained that that proposed  
13 requirement to install a minimum of 250 kW per DCFC port: (1) is an unnecessary  
14 restriction; (2) could result in over-sizing EV charging stations deployments; (3) subjects  
15 site hosts to increased equipment costs and demand charges; and (4) fails to recognize that  
16 EV charging needs can vary in terms of ports and power level depending on use case.  
17 (ChargePoint Statement No. 1 at 7). ChargePoint recommended that the Commission  
18 direct PECO to establish 50 kW as the minimum per port power level to allow site hosts to  
19 size ports in accordance with current and prospective need. (ChargePoint Statement No. 1  
20 at 7).

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<sup>6</sup> *The Real Reason Buses Were Losing Riders Even Before COVID-19*, StreetsBlog USA (August 26, 2020), [https://urldefense.com/v3/https://usa.streetsblog.org/2020/08/26/the-real-reason-buses-were-losing-riders-even-before-covid-19/\\_:!!BJC6uDBu-zY!YWNLY3KSz9unvfXwW7tLvUocNsA7HehBDkZM6UOUBBwpm9-fzK72o3xtihE3h3w\\$](https://urldefense.com/v3/https://usa.streetsblog.org/2020/08/26/the-real-reason-buses-were-losing-riders-even-before-covid-19/_:!!BJC6uDBu-zY!YWNLY3KSz9unvfXwW7tLvUocNsA7HehBDkZM6UOUBBwpm9-fzK72o3xtihE3h3w$); see also *The pandemic could devastate mass transit in the U.S. – and not for the reason you think*, Politico (January 24, 2021), <https://www.politico.com/news/2021/01/24/coronavirus-effect-mass-transit-461658>

1 **Q. DO YOU AGREE WITH WITNESS DEAL’S RECOMMENDATIONS**  
2 **REGARDING THE REQUIRED MINIMUM CAPACITY PER PORT?**

3 A. As I have previously stated, I oppose PECO’s proposed Transit Charging Program.  
4 (RESA/NRG Statement No. 1 (REVISED) at 5, 19–21). If the Commission decides to  
5 approve PECO’s proposed Transit Charging Program, I support ChargePoint’s  
6 recommendations regarding the required minimum capacity per port.

7 **Q. WHAT DID CHARGEPOINT RECOMMEND REGARDING THE SCOPE OF**  
8 **THE TRANSIT CHARGING PROGRAM?**

9 A. ChargePoint recommends that PECO consider expanding eligibility for the Transit  
10 Charging Program beyond buses to municipal fleets and to taxis and Transportation  
11 Network Companies. (ChargePoint Statement No. 1 at 8). ChargePoint claims that  
12 expanding the eligibility will increase environmental and emissions benefits of the  
13 program. (ChargePoint Statement No. 1 at 8). Presumably due to lack of data or evidence,  
14 ChargePoint takes no position on whether municipal fleets, taxis, and Transportation  
15 Network Companies provide greater environmental and emissions benefits than  
16 electrification of public transit buses. (Exhibit DP-11, ChargePoint Response to PECO Set  
17 II, No. 2).

18 **Q. DO YOU AGREE WITH CHARGEPOINT’S RECOMMENDATION THAT PECO**  
19 **EXPAND THE ELIGIBILITY FOR THE TRANSIT CHARGING PROGRAM?**

20 A. As indicated above, I oppose PECO’s proposed Transit Charging Program. If the  
21 Commission approves the proposed program, I have significant concerns with  
22 ChargePoint’s proposal to expand the eligibility of the Transit Charging Program to include  
23 municipal fleets, taxis, and Transportation Network Companies. First, ChargePoint’s  
24 proposal would require ratepayers to fund EV infrastructure that is not necessary for the  
25 provision of safe and adequate utility services. Second, ChargePoint did not provide data

1 demonstrating any actual need for subsidizing the buildout of EV charging stations for  
2 municipal fleets, taxis, and Transportation Network Companies. Third, expanding the  
3 proposed program would provide PECO access to additional charging station utilization  
4 data that it could use to undercut participants in the competitive market. Consequently, I  
5 recommend that ChargePoint’s recommendation be disregarded.

6 **Q. WHAT CONCERNS DID OCA EXPRESS REGARDING PECO’S PROPOSED**  
7 **LEVEL OF INCENTIVES UNDER THE PROPOSED TRANSIT CHARGING**  
8 **PROGRAM?**

9 A. OCA Witness Nelson voiced concern about the lack of a cap on the amount of incentive  
10 per charging port or per customer under the Transit Charging Program. (OCA Statement  
11 No. 6 at 11). As an alternative approach, Witness Nelson recommended an upper limit of  
12 33% of make-ready costs on each installation under the Transit Charging Program to ensure  
13 that ratepayers in more locations can benefit from the program. (OCA Statement No. 6 at  
14 11–12).

15 **Q. DO YOU HAVE ANY FEEDBACK REGARDING OCA’S PROPOSAL TO**  
16 **ESTABLISH A LIMIT OF 33% OF MAKE-READY COSTS ON EACH**  
17 **INSTALLATION?**

18 A. Yes. While I oppose PECO’s proposed Transit Charging Program, if the Commission were  
19 to approve the program, I support OCA’s suggestion to establish a limit of 33% of make-  
20 ready costs on each installation.

21 **Q. WHAT POSITION DO TURN AND CAUSE-PA TAKE REGARDING PECO’S**  
22 **PROPOSED PILOT TRANSIT CHARGING PROGRAM?**

23 A. TURN and CAUSE-PA expressed concern that PECO’s proposed Pilot Transit Charging  
24 Program “is not sufficiently focused on electrification of mass transit that actually serves  
25 EJ [environmental justice] areas.” (TURN and CAUSE-PA Statement No. 1 at 61). TURN  
26 and CAUSE-PA note that the proposed pilot does not specify the areas where electrification

1 should occur and recommend that PECO be required to further target the program to  
2 incentivize transit authorities to electrify bus routes serving the poorest communities in  
3 PECO's service territory and/or which serve other uniquely vulnerable populations.  
4 (TURN and CAUSE-PA Statement No. 1 at 61–62).

5 **Q. HOW DO YOU RESPOND?**

6 A. While I do not support PECO's proposed Pilot Transit Charging Program, I note that it  
7 does not appear that PECO's Pilot Transit Charging Program is designed to benefit the  
8 poorest communities in PECO's service territory. I also question why low-income  
9 customers (and all other ratepayers) should be burdened with the cost of PECO's proposed  
10 Pilot Transit Charging Program when there is no need to subsidize EV infrastructure that  
11 private companies have and will continue to install.

12 **Q. WHAT DID THE CEA RECOMMEND REGARDING THE PROPOSED PILOT**  
13 **TRANSIT CHARGING PROGRAM?**

14 A. The CEA recommended that PECO modify its Proposed Pilot Transit Charging Program  
15 so that all incentives are spent on projects located in or serving environmental justice areas.  
16 They recommended that PECO achieve this by requiring that chargers supported under the  
17 program be located at bus stations in environmental justice areas or serve buses that have  
18 a minimum of three stops in environmental justice areas on their regular route. (CEA  
19 Statement No. 2 at 7, 19).

20 **Q. DO YOU AGREE THAT ALL INCENTIVES SHOULD BE SPENT ON PROJECTS**  
21 **LOCATED IN OR SERVING ENVIRONMENTAL JUSTICE AREAS?**

22 A. No. I do not believe that adequate support has been provided to direct all incentives to  
23 projects located in or serving environmental justice areas. In discovery, PECO requested  
24 that CEA set forth the factual basis, such as studies and analyses, supporting Ms. Harris'

1 recommendation and no studies, analyses or supporting documentation were provided.  
2 (Exhibit DP-12, CEA Response to PECO Set III, No. 34).

3 **IV. RESPONSE TO RECOMMENDATIONS OF OTHER PARTIES REGARDING**  
4 **PECO'S PROPOSED L2 PILOT PROGRAM**

5 **Q. WHAT DOES CHARGEPOINT RECOMMEND REGARDING PECO'S L2 PILOT**  
6 **PROGRAM?**

7 A. ChargePoint recommended a clarification regarding PECO's proposed L2 Program, a  
8 program that, if approved, will offer significant make-ready incentives for commercial and  
9 industrial customers for applications such as public charging, fleet charging, bus charging,  
10 multi-unit dwelling charging, and workplace charging. (ChargePoint Statement No. 1 at  
11 8; PECO Statement No. 9 at 9). ChargePoint recommended that PECO clarify that site  
12 hosts receiving incentives under the program can establish the prices and pricing policies  
13 for EV charging services, if applicable. (ChargePoint Statement No. 1 at 8–9)

14 **Q. DO YOU HAVE A RESPONSE TO CHARGEPOINT'S RECOMMENDATION?**

15 A. While I do not support PECO's proposed L2 Program, I am not opposed to ChargePoint's  
16 recommendation that site hosts have the ability to establish the prices and pricing policies  
17 for EV charging services so long as the program participants may elect to use an electric  
18 generation supplier to supply electricity to the EV chargers. Customers must be free to  
19 choose the electric generation supplier supplying electricity to any EV charging stations  
20 deployed on their property.

21 **Q. HOW DID TURN AND CAUSE-PA REACT TO PECO'S PROPOSED PILOT L2**  
22 **PROGRAM?**

23 A. TURN and CAUSE-PA do not support PECO's proposed Pilot L2 Program (that would  
24 incentivize installation of L2 EV charging stations) as they are concerned that "it is  
25 premature to do so – and could lead to the displacement of low income communities and

1 communities of color.” (TURN and CAUSE-PA Statement No. 1 at 62). TURN and  
2 CAUSE-PA note that “an EV is still far out of reach for low-income households” and  
3 installing EV chargers in low-income communities could displace those communities “as  
4 higher income families look to take advantage of the green infrastructure investments.”  
5 Instead of investing in L2 charging, TURN and CAUSE-PA recommend that PECO  
6 incentivize electrification of more accessible transportation options. (TURN and CAUSE-  
7 PA Statement No. 1 at 62–63).

8 **Q. DO YOU AGREE WITH TURN AND CAUSE-PA’S REACTION?**

9 A. Yes, in part. I support TURN and CAUSE-PA’s opposition to PECO’s proposed Pilot L2  
10 Program and their assessment that EVs are still far out of reach for low-income households.  
11 While I have not analyzed whether the installation of EV chargers in low-income  
12 communities could displace those communities, I agree that the potential exists and believe  
13 that the use of ratepayer funds could be better utilized to assist low-income customers. I  
14 disagree that PECO should incentivize electrification of more accessible transportation  
15 options, as I believe the state and local government and the private market should  
16 incentivize those options (as opposed to ratepayers taking on the burden).

17 **Q. WHAT DID CEA WITNESS HARRIS RECOMMEND REGARDING PECO’S**  
18 **PROPOSED L2 PROGRAM?**

19 A. Witness Harris recommended that PECO: (1) require all incentives to be spent on  
20 commercial and industrial chargers located in environmental justice areas; (2) limit  
21 incentive eligibility to bus and commercial fleet charging stations; (3) expand incentive  
22 eligibility to include DC fast charging technology; and (4) encourage participants to enroll  
23 in time-of-use rates, and provide participants education on the benefits of such rates, for  
24 load management purposes. (CEA Statement No. 2 at 7, 20–22, 28–29).

1 **Q. DO YOU AGREE WITH THE RECOMMENDATIONS OF MS. HARRIS?**

2 A. No. At the outset, I will note that I oppose PECO’s proposed Pilot L2 Program. The first  
3 recommendation of Witness Harris that Level 2 incentives be limited to environmental  
4 justice areas is not justified based on supporting data. I note that the recommendation  
5 seems at odds with Witness Harris’ stated belief that electric utilities should “prioritize  
6 charging investments in areas that will grow the market.” (Exhibit DP-13, CEA Response  
7 to PECO Set III, No. 35). Witness Harris’ second and third recommendations – to limit  
8 incentive eligibility to bus and commercial fleet charging stations and expand incentive  
9 eligibility to include DC fast charging technology – are similarly unsupported. (Exhibit  
10 DP-14, CEA Response to PECO Set III, No. 36(b)). As indicated in my Direct Testimony,  
11 DC Fast charging is nearly 600% overbuilt in Pennsylvania. (RESA/NRG Statement No.  
12 1 (REVISED) at 11). Ratepayer funded incentives for DC fast charging technology should  
13 not be approved in this proceeding for that reason. Witness Harris’ fourth recommendation  
14 on time-of-use rates and education is addressed on page(s) 15–16 of my rebuttal testimony.

15 **V. RESPONSE TO DIRECT TESTIMONY OF OTHER PARTIES ON PECO’S**  
16 **PROPOSED EV CUSTOMER EDUCATION AND OUTREACH PROGRAM**

17 **Q. DOES CHARGEPOINT HAVE ANY RECOMMENDATIONS REGARDING**  
18 **PECO’S PROPOSED ELECTRIC VEHICLE EDUCATION AND OUTREACH**  
19 **PROGRAM?**

20 A. Yes. With regard to PECO’s proposed Electric Vehicle Education and Outreach Program,  
21 ChargePoint recommends that: (1) PECO work with stakeholders to ensure all materials  
22 are developed in a competitively neutral manner; (2) that each participating charging  
23 hardware and network software provider be permitted to include a web-link to their  
24 respective websites for use in marketing materials where customers may be directed to  
25 learn more about specific products offered as part of PECO’s EV programs; and (3) all

1 education and marketing materials and communications with customers be vendor neutral.  
2 (ChargePoint Statement No. 1 at 9–11).

3 **Q. DO YOU SUPPORT CHARGEPOINT’S RECOMMENDATIONS ON THE**  
4 **CUSTOMER EDUCATION AND OUTREACH COMPONENT OF PECO’S**  
5 **PROPOSED EV CHARGING PILOT?**

6 A. As indicated in my Direct Testimony, I recommend that the Commission reject PECO’s  
7 proposed EV Education and Outreach Program because it is unnecessary given PECO’s  
8 failure to demonstrate a need for the EV Charging Pilot. (RESA/NRG Statement No. 1  
9 (REVISED) at 24). However, if the Commission approves PECO’s proposed EV  
10 Education and Outreach Program, I recommend that ChargePoint’s following  
11 recommendations be adopted: (1) that PECO work with stakeholders to ensure all materials  
12 are developed in a competitively neutral manner; and (2) all education and marketing  
13 materials and communications with customers be vendor neutral.

14 I do not support ChargePoint’s recommendation that each participating charging  
15 hardware and network software provider be permitted to include a web-link to their  
16 respective websites for use in marketing materials where customers may be directed to  
17 learn more about specific products offered as part of PECO’s EV programs. This proposal  
18 constitutes captive marketing and would provide a competitive edge to certain hardware  
19 and network software providers.

20 **Q. WHAT OPINION DID TURN AND CAUSE-PA EXPRESS REGARDING PECO’S**  
21 **PROPOSED EV EDUCATION AND OUTREACH PROGRAM?**

22 A. TURN and CAUSE-PA only note that PECO’s proposed EV education and outreach  
23 program will be of very limited value to low income customers. (TURN and CAUSE-PA  
24 Statement No. 1 at 63).



1 **Q. DO YOU AGREE?**

2 A. Yes. I agree that PECO's proposed EV Education and Outreach Program will be of limited  
3 value to low income customers. As expressed previously, I believe that the program is  
4 unnecessary as PECO has failed to demonstrate a need for its EV Charging Pilot.

5 **Q. WITNESS HARRIS, ON BEHALF OF THE CEA, RECOMMENDED THAT THE**  
6 **COMPANY CONDUCT ADDITIONAL OUTREACH AND EDUCATION**  
7 **EFFORTS. (CEA STATEMENT NO. 2 AT 7, 29–30). DO YOU AGREE?**

8 A. No. I do not support CEA's recommendation that PECO be required to conduct additional  
9 targeted outreach and education efforts to eligible transit agencies and eligible commercial  
10 and industrial customers with vehicles based in environmental justice areas. As indicated  
11 above, I recommend that PECO's proposed EV Charging Pilot (including outreach and  
12 education efforts) be rejected as PECO has not demonstrated a need for the EV Charging  
13 Pilot.

14 **Q. CEA WITNESS HARRIS ALSO RECOMMENDED THAT PECO PROVIDE**  
15 **EDUCATION AND TRAINING ON: (1) THE EXISTING TIME-OF-USE RATES,**  
16 **BENEFITS OF THESE RATES, AND POTENTIAL BENEFITS OF SEPARATELY**  
17 **METERING CHARGING; AND (2) THE OPTIMAL TIME FOR OPERATORS TO**  
18 **CHARGE THEIR VEHICLES. DO YOU AGREE WITH HER**  
19 **RECOMMENDATION?**

20 A. No. Third parties operating in the competitive market are in the business of developing  
21 innovative products and solutions, such as time-of-use rates, and PECO should focus on its  
22 core functions as a regulated utility and leave market optimization to the market facing  
23 entities.<sup>7</sup>

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<sup>7</sup> *Power utilities are built for the 20<sup>th</sup> century. That's why they're flailing in the 21<sup>st</sup>.*, Vox (Sept. 9, 2015), <https://www.vox.com/2015/9/9/9287719/utilities-monopoly>

1 **Q. WHAT ELSE DID WITNESS HARRIS RECOMMEND REGARDING RATE**  
2 **OFFERINGS?**

3 A. Witness Harris also recommended that PECO “conduct a benefit-cost study to determine  
4 more beneficial rates to shift charging towards off-peak hours and maximize benefits to the  
5 grid and make charging economical for customers and fleets, including transit customers.”  
6 (CEA Statement No. 2 at 32-33).

7 **Q. DO YOU SUPPORT HER RECOMMENDATION?**

8 A. No. Competitive market participants are experienced with developing individually tailored  
9 products, including time-of-use rates, and services to help consumers take control of their  
10 energy consumption and costs. PECO should not interfere with competitive market  
11 offerings as it would have an unfair advantage offering EV related products due to the data  
12 that it would obtain through the proposed EV Charging Pilot.

13 **VI. RESPONSE TO RECOMMENDATIONS OF OTHER PARTIES REGARDING**  
14 **PECO’S EV-FC PILOT RIDER**

15 **Q. CHARGEPOINT SUPPORTS PECO’S PROPOSAL TO EXPAND THE**  
16 **AVAILABILITY OF THE EV-FC PILOT RIDER TO INCLUDE PUBLIC**  
17 **TRANSIT. (CHARGEPOINT STATEMENT NO. 1 AT 11). WHAT SUPPORT**  
18 **DOES CHARGEPOINT PROVIDE FOR ITS POSITION?**

19 A. ChargePoint claims that expansion of the EV-FC Pilot Rider to include public transit will  
20 provide relief from demand charges, increase access to clean vehicles, advance  
21 environmental justice and facilitate the collection of useful. (ChargePoint Statement No.  
22 1 at 11).

23 **Q. DID CHARGEPOINT PROVIDE ANY DATA DEMONSTRATING A NEED TO**  
24 **EXPAND THE PILOT RIDER OR A NEED TO INCENTIVIZE THE BUILD OUT**  
25 **OF PUBLIC TRANSIT EV CHARGING INFRASTRUCTURE?**

26 A. No, ChargePoint did not provide data supporting its position. As only two sites were taking  
27 service under the current EV-FC Pilot Rider as of January 1, 2021 (see Exhibit DP-4), there

1 is not substantial interest in the Pilot Rider and neither PECO or ChargePoint have provided  
2 adequate support or justification for expanding the program to include public transit.

3 **Q. HOW DID OCA RESPOND TO PECO’S PROPOSAL TO EXTEND THE**  
4 **ELIGIBILITY FOR THE EV-FC RIDER TO INCLUDE PUBLIC TRANSIT**  
5 **CUSTOMERS?**

6 A. OCA Witness Nelson indicated that because PECO is not requesting any additional funding  
7 to provide the demand credit under the Pilot Rider to public transit customers, he is not  
8 opposed to the proposal. Witness Nelson also notes that the Pilot Rider is not conducive  
9 to load management. (OCA Statement No. 6 at 23–24).

10 **VII. RESPONSE TO TESTIMONY ON DATA ACCESS AND ANALYSIS**

11 **Q. WHAT DID OSBA WITNESS KALCIC AND OCA WITNESS NELSON STATE**  
12 **REGARDING PECO’S STATED PURPOSE OF THE EV-PILOT TO GATHER EV**  
13 **CHARGING DATA TO INFORM FUTURE DISTRIBUTION SYSTEM**  
14 **PLANNING AND RATE DESIGN?**

15 A. In evaluating PECO’s stated purpose of the EV-Pilot to gather EV charging data to inform  
16 future distribution system planning and rate design, OSBA indicated that it is unclear how  
17 much additional data the EV-Pilot would generate over what data is already currently  
18 available to PECO and whether the information is actually needed to “inform future  
19 distribution system planning.” (OSBA Statement No. 1 at 15–18). OCA Witness Nelson  
20 indicated that the Company’s objective to inform the Company’s future distribution system  
21 planning is “vague and uninformative.” (OCA Statement No. 6 at 8).

22 **Q. DO YOU AGREE WITH OCA’S AND OSBA’S ASSESSMENT?**

23 A. Yes. I also question the necessity of the EV charging data to “inform future distribution  
24 system planning.” I continue to have concerns with the EV Charging Pilot providing PECO  
25 access to data that would create an uneven playing field for private companies that do not  
26 have access to that data to develop product offerings.

1 **Q. DID OCA EXPRESS ADDITIONAL CONCERNS REGARDING PECO'S**  
2 **PLANNED ACCESS TO EV CHARGING DATA?**

3 A. Yes. OCA Witness Nelson indicated that PECO's "objective is to feed undefined charging  
4 metrics into a black box that only the utility can access" and that "this is obviously  
5 problematic for many reasons...." (OCA Statement No. 6 at 9).

6 **Q. WHAT RECOMMENDATIONS DOES OCA MAKE REGARDING EV**  
7 **CHARGING DATA?**

8 A. OCA Witness Nelson indicated that if the Commission approves PECO's proposed EV  
9 pilots, PECO should be required to file a detailed description of what it plans to learn from  
10 charging session transactional data, the additional metrics that will be submitted with any  
11 pilot reports filed with the Commission, and an explanation as to how PECO will integrate  
12 EV charging data into its distribution planning process. (OCA Statement No. 6 at 25).  
13 Witness Nelson further recommended that the explanation should discuss Distributed  
14 Energy Resource forecasting and "mitigation approaches for addressing locationally  
15 specific peak demand requirements caused by EVs." (OCA Statement No. 6 at 25).

16 **Q. DO YOU SUPPORT OCA'S RECOMMENDATIONS?**

17 A. While I share OCA's concerns about access to EV charging data and PECO's intended use  
18 of the data, I disagree with the implied argument that EVs represent a threat to utilities.  
19 That is as logical as saying that farmers should plan when to water their horses based on  
20 the potential new Model T owners' driving habits. Shoehorning an old utility process onto  
21 a new industry fundamentally underscores the severe lack of understanding and  
22 appreciation of the EV technology, including the emerging sensory and communications  
23 features, as well as the expertise of retail electricity suppliers and electric generation  
24 owners to accurately forecast and manage a dynamic load. There is a "dizzying expansion  
25 of information and communications technology (ICT), which has the potential to

1 revolutionize every aspect of the electricity supply chain” and ICT makes “it much easier  
2 to communicate, coordinate, and automate grid interactions. It enables a larger and more  
3 heterogeneous group of market participants, all the way down to ‘smart appliances’ that  
4 shift demand based on real-time price signals.”<sup>8</sup>

5 **Q. HOW DOES CEA RECOMMEND THAT PECO IMPROVE ITS DATA**  
6 **COLLECTION EFFORTS?**

7 A. CEA recommends that PECO: (1) ensure certain metrics are included to aid in the  
8 evaluation of the success of the program; (2) evaluate avenues to enhance benefits of  
9 transportation electrification to environmental justice areas; and (3) integrate data  
10 generated by the pilot with a broader integrated distribution plan (“IDP”) process. (CEA  
11 Statement No. 2 at 7–8, 31–32).

12 **Q. PLEASE EXPLAIN CEA’S RECOMMENDATION THAT PECO IMPROVE THE**  
13 **TRANSPARENCY OF THE PROPOSED PILOT PROGRAM.**

14 A. CEA recommends that PECO improve the transparency of the pilot program by providing  
15 pilot program data semi-annually (or more frequently) on a publicly accessible website and  
16 to annually publish a report that synthesizes relevant data and explains challenges and  
17 lessons learned. CEA proposes that the published data include, at a minimum: (1) revenue  
18 generated by electricity sales at chargers supported by the program and any implications  
19 this has for electricity rates; (2) grid benefits from the program; (3) site host type; (4) load  
20 profiles by site; (5) load profiles at chargers supported by the pilot program by time of  
21 usage and whether off-peak or on-peak; (6) costs to drivers to utilize each site; (7) charging  
22 station location; (8) cost for installation and equipment; (9) transit-riders served by  
23 chargers supported by the pilot program; (10) estimated avoided air emissions for each

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<sup>8</sup> *Power utilities are built for the 20<sup>th</sup> century. That’s why they’re flailing in the 21<sup>st</sup>.*, Vox (Sept. 9, 2015), <https://www.vox.com/2015/9/9/9287719/utilities-monopoly>

1 charging station and for the pilot program as a whole; and (11) how environmental justice  
2 areas are being served by and benefited by the pilot. (CEA Statement No. 2 at 8, 31–32).

3 **Q. DO YOU SUPPORT CEA’S PROPOSAL THAT PECO BE REQUIRED TO POST**  
4 **CERTAIN DATA ON A PUBLICLY ACCESSIBLE WEBSITE AND TO**  
5 **ANNUALLY PUBLISH A REPORT THAT SYNTHESIZES RELEVANT DATA?**

6 A. While I do not support the EV Charging Pilot, I agree that, if the Pilot is approved by the  
7 Commission, greater transparency in the form of reports and publicly accessible data  
8 should be required. In addition to the specific data identified by Witness Harris, I  
9 recommend that the following pieces of data also be made publicly available by PECO:  
10 each charging event; total kWh dispensed per event; average kWh per charging event;  
11 average duration of charging events; rate per kWh; charging device operational status  
12 (uptime/downtime); time that vehicles are parked but not charging in space; faults during  
13 a charging event; network uptime/downtime; revenue charged per event; and aggregated  
14 customer demographic data. Instead of providing this data on a semi-annual basis, as  
15 Witness Harris recommends, I encourage the Commission to require PECO to make the  
16 data publicly available in as close to real-time as is practicable.

17 **Q. CEA WITNESS HARRIS ALSO RECOMMENDS THAT PECO PERFORM AND**  
18 **PUBLISH AN ANALYSIS OF CURRENT CHARGING AVAILABILITY,**  
19 **INCLUDING NUMBERS OF CHARGING STATIONS AND PORTS FOR**  
20 **VARIOUS USE CASES (SUCH AS TRANSIT, PUBLIC L2, DCFC, ETC.) TO**  
21 **EVALUATE CHARGER NEEDS. (CEA STATEMENT NO. 2 AT 32). DO YOU**  
22 **AGREE WITH HER RECOMMENDATION?**

23 A. If PECO’s EV Charging Pilot is approved by the Commission, which I recommend against,  
24 I support Witness Harris’ recommendation that PECO perform and publish an analysis of  
25 current charging availability, including numbers of charging stations and ports for various  
26 use cases.

1 **Q. WHAT ELSE DID WITNESS HARRIS RECOMMEND REGARDING DATA**  
2 **ACCESSED THROUGH THE PROPOSED EV CHARGING PILOT PROGRAM?**

3 A. Witness Harris recommends that PECO integrate all data and learnings generated by the  
4 EV Charging Pilot Program into an integrated data planning process. (CEA Statement No.  
5 2 at 33).

6 **Q. DO YOU AGREE THAT PECO SHOULD IMPLEMENT AN INTEGRATED**  
7 **DISTRIBUTION PLANNING PROCESS?**

8 A. No. For the reasons described in the section below, I do not agree that PECO should  
9 implement an integrated distribution planning process.

10 **VIII. OPPOSITION TO TESTIMONY REGARDING THE IMPLEMENTATION OF AN**  
11 **INTEGRATED DISTRIBUTION PLANNING PROCESS**

12 **Q. PLEASE DESCRIBE CEA’S PROPOSAL THAT PECO BE REQUIRED TO**  
13 **IMPLEMENT AN INTEGRATED DISTRIBUTION PLANNING PROCESS.**

14 A. CEA encourages the Commission to require PECO to implement an integrated distribution  
15 planning process that would evaluate “all reasonable and effective resources, on both the  
16 demand supply side, for meeting the demand for energy services from the electricity  
17 delivery system.” (CEA Statement No. 1 at 31).

18 **Q. HOW DOES THE PROPOSED INTEGRATED DISTRIBUTION PLANNING**  
19 **PROCESS RELATE TO ELECTRIC VEHICLE CHARGING**  
20 **INFRASTRUCTURE?**

21 A. CEA Witness Rábago describes transportation electrification infrastructure deployment  
22 and operation as “exactly the kind of distribution level activity that IDP can support  
23 effectively.” (CEA Statement No. 1 at 34). Witness Rábago opines that PECO’s proposed  
24 EV Charging Pilot Program makes a strong case for PECO adopting and using an  
25 integrated distribution plan to inform deployment of EV infrastructure, operations, and  
26 delivery system support requirements. (CEA Statement No. 1 at 35).

1 **Q. DO YOU AGREE WITH CEA’S RECOMMENDATION THAT PECO BE**  
2 **REQUIRED TO IMPLEMENT AN INTEGRATED DISTRIBUTION PLAN FOR**  
3 **THE REASONS IDENTIFIED ABOVE?**

4 A. No. On a general basis, I do not recommend that PECO be required to implement an  
5 integrated distribution plan because CEA has not adequately justified its proposal. In  
6 addition, I do not agree that an integrated distribution plan should be within the purview of  
7 the utility. In response to discovery requests, CEA could not identify an electric  
8 distribution company that does not own electric generating facilities and that distributes  
9 electricity in a service area with full retail access that is required to conduct an integrated  
10 distribution plan. (Exhibit DP-15, CEA Response to PECO Set III, No. 30). I am not  
11 aware of any Commission precedent requiring a Pennsylvania electric distribution  
12 company to implement an integrated distribution plan.

13 The OCA encouraged the Commission to consider a more comprehensive planning  
14 process for electric utilities in the Commonwealth in its comments in the Commission’s  
15 Policy Proceeding on Utilization of Storage Resources as Electric Distribution Assets.<sup>9</sup> It  
16 would be premature for the Commission to require PECO to implement an integrated  
17 distribution plan in this proceeding because the intent of the policy proceeding is to guide  
18 the Commission’s future decisions on a statewide basis. For the reasons identified above,  
19 I recommend that the Commission reject CEA’s recommendation that PECO be required  
20 to implement an integrated distribution plan.

21 Regarding an integrated distribution plan as it relates to EV charging, the utility  
22 should not be involved in the deployment of EV charging infrastructure or operations. A

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<sup>9</sup> Comments of OCA, *Policy Proceeding – Utilization of Storage Resources as Electric Distribution Assets*,  
Docket No. M-2020-3022877 (Feb. 18, 2021), <https://www.puc.pa.gov/pdocs/1693700.pdf>



1 competitive market already exists for EV charging and operations and the utility should  
2 not be permitted or required to interfere with the competitive market. As OCA Witness  
3 Nelson noted, “[t]he market for EV chargers is already mature and highly competitive, with  
4 many market providers offering a diversity of products that serve a variety of customer  
5 needs. Electric panels are also part of an emerging competitive market, with smart panels  
6 beginning to offer load control options for DERs, including EVs.” (OCA Statement No. 6  
7 at 10).

8 The Federal Energy Regulatory Commission recently approved a series of Orders  
9 (e.g. Order No. 2222 and Order No. 2222-A) permitting the aggregation of distributed  
10 energy resources for the purpose of participation in organized wholesale electricity  
11 markets.<sup>10</sup> These Orders, and their implementation, will further enhance the opportunities  
12 for competition and innovation to accomplish many of the same tasks, including EV  
13 infrastructure, that an integrated distribution plan would envelope. Allowing the utility  
14 and an IDR the “first bite” at this will necessarily slow and potentially eliminate the  
15 deployment of private investment in this same space to the detriment of PECO customers.  
16 FERC’s Order 2222 and the efforts of the organized wholesale markets such as PJM, will  
17 provide a preferable platform for private investment in lieu of the utility limiting the  
18 choices and innovation of an evolving industry.

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<sup>10</sup> *Participation of Distributed Energy Resource Aggregation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Order No. 2222, Docket No. RM18-9-000, 172 FERC ¶ 61,247 (Sept. 17, 2020), *order on reh’g*, Order No. 2222-A, 176 FERC ¶ 61,197 (Mar. 18, 2021), *order on reh’g*, Order No. 2222-B, 175 FERC ¶ 61,227 (June 17, 2021).

1 **IX. RESPONSE TO TESTIMONY OF OCA WITNESS NELSON ON LOAD**  
2 **MANAGEMENT**

3 **Q. OCA WITNESS NELSON CLAIMS THAT “SWIFT AND FOCUSED ATTENTION**  
4 **IS REQUIRED BY REGULATORS AND UTILITIES TO ENSURE EV LOADS**  
5 **ARE MANAGED THROUGH VARIOUS APPROACHES.” (OCA STATEMENT**  
6 **NO. 6 AT 12). DO YOU AGREE?**

7 A. No. Widespread EV adoption is not going to happen overnight or even within the next  
8 decade. This claim is designed to instill fear and is not grounded in fact. First, last year  
9 less than 15 million light duty vehicles in total were sold.<sup>11</sup> Approximately 270 million  
10 vehicles are registered in the U.S.<sup>12</sup> Therefore, even if every light duty new vehicle  
11 purchased starting next year was electric, it would take over 15 years for the entire fleet to  
12 turn over. Second, only 0.3 million of the nearly 15 million light duty vehicles sold last  
13 year were electric.<sup>13</sup> While total light duty EV sales<sup>14</sup> could double this year, making a  
14 year on year growth rate look exceptional, the fact is that the total number of EVs sold are  
15 small relative to combustion vehicles. Third, while it is true that some automakers have  
16 announced a phase out of combustion vehicle sales, the reality is that combustion vehicles  
17 will continue to be the top-selling type of vehicle in all categories in the U.S. for at least  
18 the next decade.

19 The misconception and fear that every car will be electric tomorrow and immediate  
20 action is warranted is at best overblown, and at worst not grounded in fact. General Motors

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<sup>11</sup> Hannah Elliot, *The automakers that have won big or lost ground going into 2021*, Pittsburgh Post-Gazette (Dec. 24, 2020), <https://www.post-gazette.com/business/auto/2020/12/24/automakers-sales-plants-pandemic/stories/202012240134>

<sup>12</sup> *State Motor-Vehicle Registrations – 2017*, U.S. Dep’t of Transp., Fed. Highway Admin., <https://www.fhwa.dot.gov/policyinformation/statistics/2017/pdf/mv1.pdf> (The total includes cars, trucks, buses, motorcycles, and other vehicles with the majority in the car and truck category.)

<sup>13</sup> *Driving to an all-electric future*, NRG (Feb. 2, 2021), <https://www.nrg.com/insights/energy-education/driving-to-an-all-electric-future.html>

<sup>14</sup> The number of medium duty vehicle, heavy duty vehicle, motorcycle, and transit bus sales will be even less than the total sales of light duty vehicles simply because they are less mature.

1 has announced that it will no longer sell combustion vehicles in the U.S. by 2035, nearly a  
2 decade and a half away.<sup>15</sup> Ford has announced that 40% of their *global* vehicles will be  
3 all-electric by 2030.<sup>16</sup> However, most of Ford’s electric sales will occur in Europe.<sup>17</sup> The  
4 electric vehicle industry is emerging, the growth numbers are impressive; however, rushing  
5 to regulate and implement programs before even the most basic research is conducted and  
6 misconceptions corrected will result in undue cost borne by ratepayers.

7 **Q. FIGURE 1 OF WITNESS NELSON’S TESTIMONY SHOWS THAT**  
8 **ELECTRIFYING APPROXIMATELY 50 BUSES CAN CREATE ABOUT 150%**  
9 **OF THE PEAK LOAD REQUIREMENT OF A MODERN NON-ELECTRIFIED**  
10 **SKY-SCRAPER. (OCA STATEMENT NO. 6 AT 14). HOW DO YOU REACT TO**  
11 **THE FIGURE?**

12 A. Figure 1 of Witness Nelson’s direct testimony is designed to spark fear and is misleading.  
13 While electric buses may have a large load, the total number of buses on a system are  
14 typically small.<sup>18</sup> Figure 1 fails to address the reality of EV adoption, which has remained  
15 low in Pennsylvania. (Exhibit DP-16, RESA/NRG Response to PECO, Set I, No. 1  
16 Attachment B). A more accurate graph would be one that depicts the number of electric  
17 vehicles currently in the Commonwealth, by type and electric consumption. As noted in  
18 my direct testimony (RESA/NRG Statement No. 1 (REVISED) at 8, line 4), the 25 SEPTA  
19 buses that were purchased have been removed from service with no anticipated return date

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<sup>15</sup> *General Motors sets goal of going largely electric by 2035*, AP News (Jan. 28, 2021),  
[https://urldefense.com/v3/https://apnews.com/article/gm-electric-vehicles-auto-industry-9308f9f3fcfbclcffd0f9d18864dbcca\\_!!BJC6uDBu-zY!beb\\_qpOSjMknjn1N2aqyW1ebQrx\\_wpHeihuLDY6OMfN\\_gm7yGbKzAjrFU1XJ73E\\$](https://urldefense.com/v3/https://apnews.com/article/gm-electric-vehicles-auto-industry-9308f9f3fcfbclcffd0f9d18864dbcca_!!BJC6uDBu-zY!beb_qpOSjMknjn1N2aqyW1ebQrx_wpHeihuLDY6OMfN_gm7yGbKzAjrFU1XJ73E$)

<sup>16</sup> *Ford: Electric vehicles to be 40% of global sales by 2030*, AP News (May 26, 2021),  
[https://urldefense.com/v3/https://apnews.com/article/electric-vehicles-technology-business-d874b87e8b7f9e2aa25330b31040c8d4\\_!!BJC6uDBu-zY!etrMyCD58GJYrLtm-vcCk\\_574sdaSSCnDx\\_Is2cw1TaBxOu7P0-pJA3qXjzfx68\\$](https://urldefense.com/v3/https://apnews.com/article/electric-vehicles-technology-business-d874b87e8b7f9e2aa25330b31040c8d4_!!BJC6uDBu-zY!etrMyCD58GJYrLtm-vcCk_574sdaSSCnDx_Is2cw1TaBxOu7P0-pJA3qXjzfx68$)

<sup>17</sup> *Id.*

<sup>18</sup> Federal Transit Administration, 2019 Vehicles, <https://www.transit.dot.gov/ntd/data-product/2019-vehicles>  
 (“Federal Transit Administration data for 2019 vehicles reflects 68,264 buses owned by transit agencies in the entire United States and 3,248 buses owned by transit agencies in Pennsylvania.”)

1 will have no contribution to peak load. Finally, if a transit authority wished to plan, invest,  
2 and install a large number of electric buses, in normal course, they would notify the utility  
3 and the utility would have an opportunity to study the installation. There is no urgent need  
4 to take pre-emptive action. There is an urgent need to understand the industry and use facts  
5 to inform decision making.

6 **Q. DID WITNESS NELSON PROVIDE A FORECAST OF EV ADOPTION OR**  
7 **IMPACT TO MWH OF LOAD ON PECO’S SYSTEM?**

8 A. No. Witness Nelson did not provide a forecast of EV adoption or impact to MWh of load  
9 on PECO’s system.

10 **Q. WITNESS NELSON CLAIMS IT IS “INCUMBENT ON THE UTILITY TO**  
11 **ADDRESS LOAD MANAGEMENT CONCERNS.” (OCA STATEMENT NO. 6 AT**  
12 **17). DO YOU AGREE?**

13 A. No. Framing load management as a solution that only utilities can solve is shortsighted  
14 and demonstrates a lack of understanding of how electric generation suppliers are already  
15 aggregating and managing price responsive load.

16 **Q. WHAT LOAD MANAGEMENT PROGRAMS DOES OCA RECOMMEND THAT**  
17 **PECO CONSIDER?**

18 A. OCA Witness Nelson recommends that, in addition to PECO’s planned offerings, PECO  
19 should consider passive and active managed charging programs, as well as offerings for  
20 Automated Load Management (“ALM”). (OCA Statement No. 6 at 18).

21 **Q. WHAT TYPES OF PASSIVE MANAGED CHARGING OFFERINGS DOES OCA**  
22 **RECOMMEND BE DEVELOPED?**

23 A. Aside from time-of-use rates, OCA claims that more advanced rate designs are necessary  
24 “to expand options for customers and ensure EV load is shifted away from peak periods to  
25 off-peak periods.” (OCA Statement No. 6 at 18–19). OCA believes that PECO should  
26 also evaluate programs that go beyond rate design and cites programs in other jurisdictions

1 that provide a “per kWh incentive for off-peak charging and/or monthly incentive for  
2 avoiding on-peak charging.” (OCA Statement No. 6 at 19).

3 **Q. DO YOU AGREE THAT THE UTILITY SHOULD CONSIDER THE PASSIVE**  
4 **MANAGED CHARGING OFFERINGS IDENTIFIED BY OCA?**

5 A. No.

6 **Q. WHAT ULTIMATE RECOMMENDATIONS DOES OCA MAKE REGARDING**  
7 **LOAD MANAGEMENT?**

8 A. OCA recommends that within 18 months of approval, PECO should file a comprehensive  
9 EV load management proposal that includes a “description of the Company’s future  
10 offerings, investments required to offer each time of load management offering, an  
11 estimated timeline to implement the offerings, to what customers segments the offerings  
12 may be made available, a proposed implementation plan for ALM to mitigate customer  
13 and utility side infrastructure requirements, and how it’s potential investment in a  
14 Distribution Energy Resource Management System (DERMS) will be leveraged to reduce  
15 EV and DER related costs across all levels of the power system.” (OCA Statement No. 6  
16 at 25–26). In addition, OCA recommends that PECO be required to “discuss opt-out  
17 offerings for passive managed charging and opt-in offerings for active managed charging  
18 for all customer types.” (OCA Statement No. 6 at 26). OCA Witness encouraged the  
19 Commission to establish a stakeholder process on the comprehensive load management  
20 proposal. (OCA Statement No. 6 at 26).

21 **Q. DO YOU HAVE ANY CONCERNS REGARDING WITNESS NELSON’S**  
22 **RECOMMENDATIONS?**

23 A. Yes. I do not believe it is necessary or appropriate for PECO to be required to file a  
24 comprehensive EV load management proposal. I am also concerned that OCA is  
25 recommending that PECO evaluate the merits of an opt-out offering for passive managed

1 charging and opt-in offering for active managed charging. Load management should be  
2 both market driven and offered only on an opt-in, voluntary basis.

3 There are numerous applications and interfaces available for EV owners to manage  
4 charging such as the FordPass App, Tesla App, and smart charger apps. EV technology is  
5 advancing and certain EVs already can start, stop and schedule charging either directly by  
6 sensing and communicating with the vehicle or indirectly through the charging device.  
7 Currently, Green Mountain Energy, an NRG subsidiary and retail electric provider in  
8 Texas, has an application built into its retail electric app that allows Tesla owners to  
9 schedule their own charging.<sup>19</sup> This app is an improvement over the Tesla app which only  
10 allows users to turn charging on or off but not to schedule charging. The technology  
11 currently available demonstrates that the competitive market is innovative and already  
12 offering solutions to EV owners.<sup>20</sup>

13 **X. CONCLUSION**

14 **Q. DOES THAT COMPLETE YOUR REBUTTAL TESTIMONY?**

15 **A. Yes.**

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<sup>19</sup> See *Meet the Green Mountain App*, Green Mountain Energy, <https://www.greenmountainenergy.com/app/>. Green Mountain Energy recently updated its app so that customers on the “EV All Nighter Plan” can now link their Tesla to schedule charging their EV at a lower price every night when plugged in at home.

<sup>20</sup> *Power utilities are built for the 20<sup>th</sup> century. That’s why they’re flailing in the 21<sup>st</sup>.*, Vox (Sept. 9, 2015), <https://www.vox.com/2015/9/9/9287719/utilities-monopoly>

**RESA/NRG  
EXHIBIT DP-11**

**Pennsylvania Public Utility Commission v. PECO Energy Company – Electric Division  
Docket R-2021-3024601**

**Response of ChargePoint, Inc. to the Interrogatories of PECO Energy Company – Electric  
Division – Set II  
Witness: Matthew Deal**

**PECO-CHARGEPOINT-II-2.** Refer to ChargePoint Statement No. 1, page 3, lines 16-17 and page 8, lines 3-7. Does Mr. Deal believe that electrification of municipal fleets, taxis, and Transportation Network Companies provides greater environmental and emissions benefits, on a dollar for dollar basis, than does electrification of public transit buses? Please set forth the factual basis, including all studies and analyses and any supporting documentation, for Mr. Deal’s response.

**Response:** ChargePoint witness Mr. Deal takes no position as to whether municipal fleets, taxis, and Transportation Network Companies (“TNC”) provide greater environmental and emissions benefits on a dollar for dollar basis than electrification of public transit buses. However, there is evidence that substantial emissions benefits would result from the electrification of these fleets. A report from the National Center for Sustainable Transportation found that using an EV, instead of a gasoline-powered vehicle, for full-time TNC services reduces CO2 emissions by around 40 kg/car/day, nearly three times the emissions reduction benefit associated with replacing a privately-owned gasoline-powered vehicle with an EV.<sup>1</sup>

Further, Witness Deal recommends inclusion of these fleets as a means to increase the overall effectiveness of the program, not as a replacement for public transit buses.

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<sup>1</sup> Jenn, Alan, 2019, Emissions Benefits of Electric Vehicles in Uber and Lyft Services, doi: 10.7922/G23R0R38, <https://escholarship.org/uc/item/15s1h1kn>.



**RESA/NRG  
EXHIBIT DP-12**

Pennsylvania Public Utility Commission

v.

PECO Energy Company

PECO Energy Company General Rate Increase Request

Docket No. R-2021-3024601

PECO Discovery Requests

Directed to the

Clean Energy Advocates

Set III

Responsible Witness: Kathleen A. Harris

Response Date: 07/12/2021

PECO-CEA-III-34:

Refer to CEA Statement No. 2, page 7, lines 4-7, please set forth the factual basis, including all studies and analyses and any supporting documentation, for Ms. Harris's recommendation that incentives for transit electrification should be limited solely to installations located in or serving environmental justice areas.

RESPONSE:

The witness' testimony speaks for itself, is informed by the witness' expert judgment, and cites extensive technical and scientific authorities. The witness recommends that given the limited funds available in this rate case, the proposed transportation electrification investments should be made in environmental justice areas (as defined by the Pennsylvania Department of Environmental Protection). The testimony also contains a detailed discussion of "the environmental justice benefits of transportation electrification" beginning on page 8, line 10 of CEA Statement No. 2.

**RESA/NRG  
EXHIBIT DP-13**

Pennsylvania Public Utility Commission

v.

PECO Energy Company

PECO Energy Company General Rate Increase Request

Docket No. R-2021-3024601

PECO Discovery Requests

Directed to the

Clean Energy Advocates

Set III

Responsible Witness: Kathleen A. Harris

Response Date: 07/12/2021

PECO-CEA-III-35:

Refer to CEA Statement No. 2, page 7, lines 9-10, where Ms. Harris recommends that Level 2 incentives be limited to environmental justice areas.

- a. Is this recommendation consistent with Ms. Harris's belief (page 3, lines 21-24) that electric utilities "take a portfolio approach to address these concerns across the board for all on road vehicle classes and types"? Please set forth the factual basis, including all studies and analyses and any supporting documentation, for Ms. Harris's response.
- b. Is this recommendation consistent with Ms. Harris's belief (page 4, lines 6-9) that electric utilities should "prioritize charging investments in areas that will grow the market"? Please set forth the factual basis, including all studies and analyses and any supporting documentation, for Ms. Harris's response

RESPONSE:

- a. Yes. The witness' testimony speaks for itself, is informed by the witness' expert judgment, and cites extensive technical and scientific authorities. The witness recommends that given the limited funds available in this rate case, the proposed transportation electrification investments should be made in environmental justice areas (as defined by the Pennsylvania Department of Environmental Protection). However, the Company can and should think and plan broadly over the long term, most importantly through integrating transportation electrification investments into an integrated distribution planning process as recommended by the witness.
- b. Please see the above response to subpart "a".

**RESA/NRG  
EXHIBIT DP-14**

Pennsylvania Public Utility Commission

v.

PECO Energy Company

PECO Energy Company General Rate Increase Request

Docket No. R-2021-3024601

PECO Discovery Requests  
Directed to the  
Clean Energy Advocates  
Set III

Responsible Witness: Kathleen A. Harris

Response Date: 07/12/2021

PECO-CEA-III-36:

Refer to CEA Statement No. 2, page 7, lines 13-14 and page 21, lines 4-7.

- a. Is Ms. Harris aware of PECO's existing EV-FC Pilot rider where PECO applies a demand (kW) credit initially equal to 50% of a DCFC nameplate capacity rate for customers installing a qualifying public DCFC served under Rate GS, PD, or HT?
- b. Please set forth the factual basis, including all studies and analyses and any supporting documentation, for Ms. Harris's recommendation that the L2 program be expanded to include DCFC technology.
- c. Has Ms. Harris quantified the impact to the number of L2 customers who will receive incentives as a result of including DCFC technology in the Level 2 Incentive program? If yes, please provide all studies and analysis and any supporting documentation for such quantification.

RESPONSE:

- a. Yes. The cited rider is not a substitute for the witness' recommendations.
- b. The witness' testimony speaks for itself, is informed by the witness' expert judgment, and cites extensive technical and scientific authorities.
- c. The witness' testimony speaks for itself and the witness did not offer testimony on this point.

**RESA/NRG  
EXHIBIT DP-15**

Pennsylvania Public Utility Commission

v.

PECO Energy Company

PECO Energy Company General Rate Increase Request

Docket No. R-2021-3024601

PECO Discovery Requests  
Directed to the  
Clean Energy Advocates  
Set III

Responsible Witness: Karl R. Rábago

Response Date: 07/12/2021

PECO-CEA-III-30:

Refer to CEA Statement No. 1, pages 24-35, where Mr. Rábago recommends that PECO be directed to develop and implement an integrated distribution planning process. Please provide a list of examples in which an EDC, that does not own electric generating facilities and that distributes electricity in a service area with full retail access, is required to conduct an integrated distribution plan or other planning approach like the one Mr. Rábago recommends in this case for PECO (whether or not it is required to do so). For each example cited, state whether this planning process is required of just one EDC in the EDC's respective state or whether it is required of all EDCs in the EDC's respective state.

RESPONSE:

The witness' testimony speaks for itself and the witness did not offer testimony on the specific questions of fact listed above. However, the witness has significant relevant experience in New York, which requires that distribution utilities conduct the kind of planning described in the testimony.



# **RESA/NRG EXHIBIT DP-16**

RESA/NRG Response to PECO, Set I, No. 1  
Attachment B is being provided in excel format

**Response of the Retail Energy Supply Association (“RESA”) and  
NRG Energy, Inc. (“NRG”) to the Interrogatories of PECO Energy Company (“PECO”),  
Set I in Docket No. R-2021-3024601**

**Request: PECO-RESA-NRG-I-1.** Provide the workpapers associated with, and underlying, RESA and NRG Statement No. 1 (Direct Testimony of Danita Park) and any accompanying tables, schedules and exhibits. If any of such workpapers or the tables, schedules and exhibits accompanying RESA and NRG Statement No. 1 are in electronic format, such as Excel, also provide such workpapers, tables, schedules and exhibits in their live, native format with formulas intact.

**Response:** See the attached work papers (Excel spreadsheets) as follows:

- A. RESA/NRG Response to PECO-RESA-NRG-I-1 Attachment A (concerning alternative fuel stations in Pennsylvania)
- B. RESA/NRG Response to PECO-RESA-NRG-I-1 Attachment B (concerning transit bus vehicles in Pennsylvania)

Please note that electronic links to documents cited in my Direct Testimony (RESA and NRG Statement No. 1 (REVISED)) are embedded in the testimony.

**Response provided by:** Danita Park  
Director, Electric Vehicle and Commercial Development  
NRG Energy, Inc.

**Dated:** July 9, 2021

**VERIFICATION**

I, Danita Park, hereby state that I am Director, Electric Vehicle and Commercial Development for NRG Energy, Inc. and am authorized to make this verification on behalf of the Retail Energy Supply Association and NRG Energy, Inc. I hereby verify that the facts set forth in the attached discovery responses which I am sponsoring are true and correct to the best of my knowledge, information and belief. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Dated: July 9, 2021

*Danita Park*

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Danita Park  
Director, Electric Vehicle and  
Commercial Development  
NRG Energy, Inc.

**VERIFICATION**

I, Danita Park, hereby state that: (1) I am the Director, Electric Vehicle and Commercial Development for NRG Energy, Inc.; (2) that I am authorized to submit this testimony on behalf of the Retail Energy Supply Association and NRG Energy, Inc.; (3) the facts set forth in this testimony are true and correct (or are true and correct to the best of my knowledge, information and belief); and (4) that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Dated: July 22, 2021

*Danita Park*

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Danita Park  
Director, Electric Vehicle and  
Commercial Development  
NRG Energy, Inc.