COZEN O'CONNOR
A Pennsylvania Professional Corporation

October 19, 2020

William Lesser
Direct Phone 212-453-3808
Direct Fax 646-588-1450
wlesser@cozen.com

VIA E-MAIL

Aida Camacho-Welch, Secretary
Board of Public Utilities
44 South Clinton Ave., 9th Floor
P.O. Box 350
Trenton, NJ 08625-0350

Re: In the Matter of the Petition of Atlantic City Electric Company for Approval of a Voluntary Program for Plug-In Vehicle Charging
BPU Docket No. EO18020190

Dear Secretary Camacho-Welch:

This firm represents Electrify America, LLC ("Electrify America") in the above-captioned proceeding. We are submitting herewith the Prepared Rebuttal Testimony of Jigar J. Shah on behalf of Electrify America.

Given current circumstances, we are making this filing electronically only, and serving copies on the service list electronically.

Respectfully,

COZEN O'CONNOR, PC

By: William Lesser

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Attachments

BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF ATLANTIC CITY ELECTRIC COMPANY FOR APPROVAL OF A VOLUNTARY PROGRAM FOR PLUG-IN VEHICLE CHARGING	: : : : :	BPU DOCKET NO.: EO18020190

PREPARED REBUTTAL TESTIMONY OF JIGAR J. SHAH ON BEHALF OF ELECTRIFY AMERICA, LLC.

Ira G. Megdal, Esq.
William Lesser, Esq.
Cozen O'Connor
Liberty View, Suite 300
457 Haddonfield Road
Cherry Hill, NJ 08002
imegdal@cozen.com
856-910-5007
wlesser@cozen.com
212-453-3808
Attorneys for Electrify America, LLC

David Appelbaum
Senior Counsel
Electrify America, LLC

October 19, 2020

I. INTRODUCTION AND SUMMARY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Jigar J. Shah. My business address is 2003 Edmund Halley Drive, 2nd Floor, Reston, Virginia 20191.

Q. ARE YOU THE SAME JIGAR J. SHAH WHO FILED DIRECT TESTIMONY IN THIS PROCEEDING ON SEPTEMBER 18, 2020?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to respond to the direct testimony of the Division of Rate Counsel's witnesses, Ezra D. Hausman, Ph.D. and David E. Peterson, and to respond to the direct testimony of Zeco Systems Inc. d/b/a Greenlots' ("Greenlots") witness Joshua J. Cohen. With respect to the direct testimony of the Division of Rate Counsel's witnesses, I discuss Electrify America's position that Atlantic City Electric's ("ACE") petition should be granted with certain modifications set forth in my direct testimony and that the Board should implement demand charge reform to incentivize and encourage continued development and investment in EV infrastructure in New Jersey that will allow the State to meet its goals of electrification of the transportation sector in order to reduce greenhouse gas emissions. With respect to the testimony of Greenlots' witness, I discuss Electrify America's position that the Board should adopt the shared responsibility approach in this proceeding and that ACE's role as an owner or operator of EV infrastructure should be limited to a last resort measure.

II. REBUTTAL TO DIVISION OF RATE COUNSEL DIRECT TESTIMONY

Q. PLEASE SUMMARIZE THE RECOMMENDATIONS OF THE DIVISION OF RATE COUNSEL'S WITNESSES.

A. The Division of Rate Counsel's Witness Ezra D. Hausman, Ph.D., testifies that the Board should deny ACE's petition in its entirety, or alternatively that the Board reject offerings 3, 5, 6, 7, 10, 11, and 12; approve offering 13; and approve offerings 1, 2, 4, and 9 in part with certain modifications. (Hausman Direct Testimony 5:12-6:14). With respect to offering 9, the demand charge incentive and "make ready" work incentives for non-utility owned public DCFCs, Dr. Hausman recommends the Board reject the demand charge incentive proposed by ACE. (Hausman Direct Testimony 45:13-18). Dr. Hausman explains that ACE's proposals are premature because the Board has not yet issued a ruling on the Staff's EV Straw Proposal under Docket No. QO20050357. (Hausman Direct Testimony 5:16-19). The Division of Rate Counsel's Witness David Peterson similarly has an unfavorable view of ACE's program based on principles of ratemaking policy and recommends that any subsidization of ACE's program offerings by ratepayers should be rejected by the Board. (Peterson Direct Testimony 11:17-12:17).

Q. DO YOU AGREE WITH THE RECOMMENDATION THAT ACE'S PETITION SHOULD BE DENIED IN ITS ENTIRETY?

A. No. As stated in my direct testimony, the Board should approve ACE's petition with certain modifications, including: (i) the approval of a marginal, permanent EV rate or incentive that provides effective utility rates for electricity delivered to public charging stations that are commensurate with if not lower than those for residential charging; (ii) incentives that address undue barriers to the private sector in New Jersey and deferral of consideration of ratepayer subsidized, utility-owned and operated charging infrastructure until such incentives have been put into place and have taken effect; and (iii) the expansion of eligibility for any approved rate or EV incentive program designed to assist in continuing EV charging station development to early investors in New Jersey in addition to future investments, among other recommendations. Further, the contention that ruling on ACE's program offering would be premature is no longer an issue as the Board issued an Order Adopting the Minimum Filing Requirements for Light-Duty, Publicly-Accessible Electric Vehicle Charging, in *In the Matter of Straw Proposal on Electric Vehicle Infrastructure Build Out*, Docket No. QO20050357, on September 23, 2020 (the "Straw Proposal Order"). This Order, among other things, requires EDCs to file EV proposals that incorporate the minimum requirements contained in the Order and provides that "[a]ny electric vehicle proposal currently filed with the Board on or before this Order need not be refiled; however, the Board **DIRECTS** Staff to use this Order to inform its position on any current or future proposals." (Straw Proposal Order at 26).

Q. WHY DOES THE DIVISION OF RATE COUNSEL FAVOR DENIAL OF ACE'S PROGRAM OFFERINGS?

A. The Division of Rate Counsel finds that the program offerings suggested by ACE are weighed toward subsidizing PIV charging equipment for a few individuals or corporations at the expense of all ACE ratepayers. (Hausman Direct Testimony 13:3-10). The Division of Rate Counsel suggests that companies participating in ACE's programs would be "free riders" in obtaining benefits of ratepayer-subsidized incentives for behavior that they would have done in the absence of such a subsidy. With respect to the demand charge rebate proposal, Rate Counsel finds that demand charges send the right message to the market to encourage innovation and technical solutions.

Q. DO YOU AGREE THAT SUBSIDIZATION MUST TAKE PLACE FOR DEMAND CHARGE REFORM OR IN ORDER TO IMPLEMENT A DEMAND CHARGE REBATE PROPOSAL?

A. No. The proper establishment of rates on a marginal cost basis would incentivize greater commercial EV adoption and recruitment of incremental load during the critical developing years of the commercial EV market. It would also better reflect the true cost of serving new commercial EV load on the system. Electrify America submits that there is no substantiated ‘additional cost’ to support high volume, short duration loads at public charging stations once respective line extension costs have been paid. Electrify America relies on Great Plains Institute, *Overcoming Barriers to Expanding Fast Charging Infrastructure in the Midcontinent Region* (2019), which states the following regarding demand charge limiter provisions, with an emphasis on how such provisions reflect cost-causation: “There is a widely recognized cost basis for the limiter provision. At the charging session lengths and utilization levels studied in the analysis for this white paper, DCFC stations load factors reached a maximum of 11.5 percent while having relatively high peak demands. As customer load factors progressively decline from an average level across the customer base, the probability of a customer peak demand occurring during a system peak times drops at a faster rate than the load factor. This relationship is known as the ‘Bary Curve’ in the electric utility industry.” Thus it is my position that rates for EV charging should be set at marginal cost, which has historically been done for economic development and business attraction rates. Application of the “Bary Curve” provides that demand charges in their current form do not appropriately reflect cost-causation for low-load factor EV charging infrastructure. Instead of questioning ratepayer subsidization, and thereby assuming it to be necessary to implement demand charge reform, one should ask instead why low-load factor EVSE providers should be subsidizing electric public utility customers through an antiquated demand charge framework when such a framework inhibits electric vehicle adoption in the state.

Q. PLEASE DESCRIBE THE DIVISION OF RATE COUNSEL’S CONCERNS WITH ACE’S COST RECOVERY PROPOSAL.

A. The Division of Rate Counsel is concerned with ACE's PIV Program Regulatory Asset proposal because its position is that the costs associated with ACE's program offerings should be borne by those who charge and drive PIVs, and not placed on ratepayers who may not own PIVs or any vehicles. The Division of Rate Counsel finds that ACE's proposals are designed to force ACE's general body of customers to subsidize the Company's costs of providing PIV service to relatively few electric customers. As stated in Rate Counsel's comments on the Straw Proposal, and repeated in the direct testimony of Dr. Hausman, "[r]equiring ratepayers as a whole, many of whom many never be able to afford these luxury vehicles, to subsidize those who can afford them, is wholly inequitable, and is not made up by the fact that there may be system benefits several decades from now." (Hausman Direct Testimony 18:2-5).

Q. DO YOU HAVE A RESPONSE TO THIS CONCERN?

A. Yes. As provided in my direct testimony, the nascent nature of the public charging network and EV industry in New Jersey, which will grow to meet the goals of the New Jersey Energy Master Plan and the Clean Energy Act, requires a rate that will encourage investment in that network. Electrify America consistently advocates that fixed charges and demand charges present a barrier to expanded DCFC investment and therefore widespread transportation electrification. (Shah Direct Testimony 4:11-20). New Jersey has made it a goal to increase widespread plug-in vehicle adoption based largely on the associated environmental benefits. As stated in the Straw Proposal Order, "New Jersey's transportation sector accounts for 42% of the state's net greenhouse gas emissions, making it the largest emissions source in the state and a critical place to start when tackling the issue of reducing emissions." (Straw Proposal Order at 1). In 2020, the State enacted the PIV Act, finding that "vehicle electrification offers a wide range of benefits, such as improved air quality, reduced greenhouse gas emissions, and savings in motor vehicle operating costs for vehicle owners." N.J.S.A. 48:25-1. The PIV Act makes it a goal for there to be at least 330,000 light-duty plug-in EVs registered in New Jersey by December 31, 2025, and at least 2 million EVs registered in New Jersey by December 31, 2035. The PIV Act also seeks to have at least 400 DC fast chargers available for public use at no fewer than 200 charging locations in the State by December 31, 2035. Given these goals, the Board recognizes that a circular problem exists where "the private sector has not made a business case to install EV chargers without a critical mass of EVs on the road, and consumers are hesitant to purchase EVs without the ability to charge away from home." (Straw Proposal Order at 3). In Electrify America's National ZEV Investment Plan: Cycle 2, dated February 4, 2019 ("Cycle 2 Plan"), we explain that "[a]n EV-focused utility environment, with utility infrastructure support (such as make-readies), DCFC specific energy rates, and lower or non-existent demand charges, can have a significant impact on the economics of the station. … Metro areas where these same conditions are not as positive, especially those with high demand peak charges, can make the economics of owning and operating DCFC stations over the long-term particularly challenging." (Cycle 2 Plan at 34). Therefore, utility infrastructure support and a regulatory environment that promotes EV infrastructure development is critical to end the circular problem and allow the State of New Jersey to meet its EV goals and reduce greenhouse gas emissions. Further, Electrify America supports addressing environmental justice concerns that are exacerbated by the lack of public charging infrastructure. Lower-income Americans are more likely to reside in multi-unit dwellings where access to home charging is more difficult to obtain. Current electric vehicle adoption is concentrated with households that have access to charging at home. This means that a large demographic of the population that rents property or otherwise resides in multi-unit dwellings will be dependent on public charging stations. In order to increase EV adoption, the need for available, convenient, and ultra-fast EV charging to populations that cannot easily install a home charger will be of greater importance. The BPU recognized this in its Straw Proposal Order, in which the Staff identified that "EV adoption at multi-family dwellings is critical to achieving widespread and equitable adoption of EVs" and recommended that "EV Chargers located at multi-family dwellings utilize the same rate as residential customers are charged for EV charging," which was approved by the Board. (Straw Proposal Order at 23, 26).

Q. PLEASE DISCUSS THE DIVISION OF RATE COUNSEL'S POSITION ON DEMAND CHARGES.

A. The Division of Rate Counsel recommends that the Board reject ACE's proposed demand charge incentive in program offering 9. The Division of Rate Counsel finds that EVSE providers should be incentivized to concentrate charging in off-peak hours, or to implement other solutions to mitigate on-peak loads such as on-site energy storage. Therefore, Rate Counsel does not support the complete elimination of demand charges or the economic signal they represent. It is Rate Counsel's position that given the costs demand charges are designed to reflect, private DCFC owners should have an appropriate incentive to mitigate those costs themselves. Muting this market signal would compromise the opportunity for private sector solutions, and at the same time impose these costs on other ratepayers. (Hausman Direct Testimony 44:14-45:18).

Q. DO YOU AGREE WITH THE RECOMMENDATION THAT ACE'S PROPOSED DEMAND CHARGE INCENTIVE IN PROGRAM OFFERING 9 SHOULD BE REJECTED?

A. No. As discussed in my direct testimony, demand charge frameworks create a disincentive for investments in customer-friendly, high-powered charging, and induce investments towards low-powered (and thus significantly slower) charging where such demand charges can be somewhat managed without curtailing charging sessions. This adversely affects transportation electrification. (Shah Direct Testimony 12:17-13:21). Many other jurisdictions have approved rates that reduce or eliminate demand charges for low-load commercial customers and EV charging infrastructure in order to meet state policy goals. (Shah Direct Testimony 18:4-19:15). High demand charges as contemplated by the Division of Rate Counsel present a significant barrier toward increased investment in EVSE infrastructure in New Jersey and therefore an impediment toward achievement of the State's EV goals through the PIV Act, Clean Energy Act, and Energy Master Plan. The Board recognizes the obstacle of demand charges in its Straw Proposal Order, in which Staff agreed that "demand charges are an obstacle to EV adoption," acknowledged "that tariff demand charges remain a hurdle to private investment," and therefore "urge[d] each EDC to propose a method to address the burden caused by demand charges in the emerging market." Therefore, the Board Order requires that EDC filings include a proposal to address how to minimize the barriers to EV adoption created by demand charges. (Straw Proposal Order at 10, 23, 26). Further, Electrify America has considered and implemented alternative strategies to mitigate the effect of high demand charges, including through use of on-site energy storage, but such strategies have a limited impact on reducing the high cost of demand charges. Given real estate constraints, on-site energy storage is not possible at every charging location, and the cost associated with on-site energy storage detracts from additional investment and

Electrify America's ability to expand charging infrastructure in more locations. The amount of energy storage available only mitigates a fraction of the risk caused by high demand charges. For example, Electrify America's on-site energy storage planned for its East Brunswick charging station is a 210 kW system, which results in only approximately 10% of the risk being practically viable to mitigate. This results in a large risk that cannot be mitigated by on-site storage. In short, high demand charges present a significant barrier toward increased investment and development in EV infrastructure and in particular the consumer-friendly fast charging stations. For this reason, demand charges should not be utilized and should be minimized, and as the Staff recommended, "EV Chargers located at multi-family dwellings [should] utilize the same rate as residential customers are charged for EV charging" (Straw Proposal Order at 23).

III. REBUTTAL TO GREENLOTS DIRECT TESTIMONY

Q. PLEASE SUMMARIZE THE TESTIMONY OF GREENLOTS' WITNESS.

A. Greenlots' Witness, Joshua J. Cohen, suggests that utility ownership, operation, and procurement of charging infrastructure and stations is vital to support competition in the industry and grow the market. "Far from harming the EV charging market in New Jersey, Greenlots firmly believes that utility investment in charging—including ownership of charging stations—will increase EV adoption. This will in turn increase demand for charging station and services, thereby supporting the growth and maturation of the private competitive market." (Cohen Direct Testimony 20:423-24:506).

Q. DO YOU AGREE WITH GREENLOTS THAT UTILITY OWNERSHIP AND INVESTMENT IN CHARGING STATIONS WILL BENEFIT THE COMPETITIVE MARKET?

A. No. As stated in my direct testimony, ACE's proposal to own and operate charging stations is premature, as efforts to address barriers to private sector investment should be addressed first before considering whether such utility-ownership and operation is necessary. The competitive advantage of utilities owning and operating stations could encourage EVSE infrastructure companies to seek investments in other states or other service areas where charging volume will not be compromised by a competitor with a BPU supported rate of return. Electrify America supports the shared responsibility approach of utility investment in make-ready infrastructure and private investment in the DCFC charger and customer experience to meet infrastructure policy goals for the State of New Jersey. In the event that such measures are not sufficient, Electrify America holds that additional, targeted incentives to offset further capital and operational costs may be a path forward, especially in disadvantaged communities. Such an approach would continue to promote and develop private, competitive EVSE infrastructure company investment while reducing costs to ratepayers and risk of stranded assets compared to the rate of return that ACE would derive for utility owned and operated DCFC. (Shah Direct Testimony 21:3-22:17). Moreover, Staff recommended that the Board adopt the "shared responsibility" model for EV infrastructure in the Straw Proposal proceeding. EDCs' role would be primarily to "Make-Ready" a site for publicly-accessible EV infrastructure. Each EDC would be responsible for the wiring and backbone infrastructure necessary to enable a robust number of Charger-Ready locations. Non-utility entities, including EVSE Infrastructure Companies, would be responsible for installing, owning, operating, and marketing EVSE using private capital. EDCs may own and operate EV Chargers and EVSE as a "Last Resort"—Areas of Last Resort are locations that have not generated private investment interest for a minimum of 12 months after the EDC program has begun, for overburdened communities, or 18 months for other areas. Overburdened communities means any census block group in which at least half of the households qualify as low-income households and either at least 40% of the residents identify as Black, African American, Hispanic or Latino, Asian, Pacific Islander, or as members of a State-recognized tribal community or at least 40% of the households have limited English proficiency. “Last Resort” is intended to apply to areas where installation of publicly-accessible EV chargers has not yet materialized. The Board adopted these recommendations and found that EVSE Infrastructure Companies, site owners, and property management companies are the preferred owners and operators of EVSE, however EDCs may own and operate EV chargers as a “Last Resort” with Board approval before any work is conducted. (Straw Proposal Order at 12-13, 18-22, 26). Electrify America agrees with this approach by the Board and continues to contend that competition should spur best outcomes.

Q. DOES THIS CONCLUDE YOUR ANSWERING REBUTTAL TESTIMONY AT THIS TIME?

A. Yes.