



January 26, 2018

VIA ELECTRONIC MAIL

Email: EVStakeholder.Group@bpu.nj.gov

**RE: New Jersey Electric Vehicle Infrastructure Stakeholder Group; Sierra Club
Response to Follow-Up Task 1 Questions**

Dear Members of the EV Infrastructure Stakeholder Group:

On behalf the Sierra Club and its more than 22,000 members in New Jersey, we are pleased to provide the following responses to Task 1 follow-up questions posed by Board Staff in its December 20, 2017 notice.

Question 3.2: What could be the expected impacts and costs (positive and negative) on generation, transmission and distribution systems by the years 2025, 2030 and 2050?

The system impacts of new EV load are critically dependent on the steps New Jersey takes to manage this load. If most charging occurs at off-peak times, significant electrification can be incorporated with modest impacts to peak demand (thus requiring little to no incremental capacity). And if a significant portion of the charging can be managed or regulated directly by the utility, transmission and distribution system impacts can be minimized as well, and charging can even be timed to coincide with high levels of renewable generation, enabling smoother integration of increased levels of renewables into the system. If well managed, the incremental EV load would also benefit ratepayers by spreading relatively unchanged system costs over more billing determinants.

To ensure that the potential benefits of vehicle electrification are realized, we urge the BPU to foster the development of the tools necessary to manage EV load. Load management can take either passive or active forms. Passive load management involves providing incentives to charge vehicles at desired times. Examples can include whole house or EV-only time-of-use (“TOU”) rates, and incentive programs such as ConEd’s SmartCharge NY program described by Sherry Login at the January 22, 2018 stakeholder meeting. Active load management involves programs that enable utilities to directly curtail or manage vehicle charging to moderate impacts of EV load on system peaks or to time charging to coincide with high levels of renewable penetration. For example, Eversource piloted a program in Massachusetts that enabled the utility to directly curtail EV charging during times of peak system demand.¹ Participants in the program could elect to override curtailment but received a monthly credit on their bill if they declined to override curtailment more than four times in a monthly billing period.²

¹ Electric Vehicle Pilot Smart Charge Tariff and Customer Agreement, Mass. DPU 12-95 (Nov. 24, 2014).

² *Id.* at 2-3.

Although at current levels of EV penetration, the impact of EV load on peak demand and on overall system performance is likely to be modest, these impacts will grow as the number of EVs charging on the grid rises if load is not managed. It is therefore important to take advantage of the opportunity now to develop effective passive and active mechanisms for managing EV load at this time. In light of the expense of installing a second meter to implement EV-only TOU rates, the BPU should encourage utilities to develop pilots to test strategies that obviate the need for a second meter. These strategies could involve use of “smart” charging capabilities in the charger or in the car. In a package of utility proposals recently submitted to the Maryland Public Service Commission, the state’s utilities have requested a waiver of certain requirements applicable to submeters to enable strategies that would avoid the need for second meters.³ Additionally, utilities can pilot options for defraying costs of second meters.

Question 5.1: Is vehicle charging a fully competitive market across all market sectors (e.g. residential, public L2, public DCFC, low income communities and Multi Unit Dwellings)? If not which market sectors are not competitive and why not? Which market sectors are competitive? What is the business case for the EVSE industry and where does the business case fail?

If the question is asking whether the competitive market is currently reaching all potential market segments, the answer is no. For different reasons, the competitive market is not currently providing charging stations in settings that would enable EV ownership by potentially interested drivers.

A driver is unlikely to invest in an EV without some assurance that he or she will have access to convenient and reliable charging options. For residents of detached single-family homes with dedicated off-street parking, home charging is likely to provide that convenient and reliable option.⁴ For other drivers, they may need to rely on alternative public or semi-public charging options. For these options to be effective in enabling EV ownership they will either need to be at locations routinely visited by the driver and where the driver parks for extended periods of time (e.g., their workplace, the parking facility at their apartment building) or potentially a neighborhood fast charging station that could be visited periodically with minimal inconvenience.

While the competitive market is reaching some market segments, for structural and economic reasons, certain market segments are being underserved, including multi-unit dwellings (“MUDs”), workplaces, and low-income communities. Utilities also need to explore ways to help reduce barriers to deployment of DC fast chargers. For MUDs, there are multiple possible impediments, including the driver not owning a dedicated parking space or lacking the authority to install an EV charger at their dedicated space. For workplaces, employers may lack sufficient economic incentives for providing EV chargers to employees. And in lower-income communities, the costs of the EV service equipment may be prohibitive.

³ See Petition for Implementation of a Statewide Electric Vehicle Portfolio, Maryland Pub. Service Commission (filed Jan. 19, 2018), at 53.

⁴ For longer distance inter-city travel, such a driver will also need access to convenient fast charging options along those travel corridors.

Question 5.2: If the charging market sections are not competitive should the utilities be allowed to develop managed charging programs for the non-competitive charging market sections? If not why not?

As discussed in our initial comments we support utility efforts to accelerate deployment in settings that are critical to enabling EV adoption that are presently not being served by the competitive market. The principles that we believe should guide these investments are described in response to Question 5.5 below. Market segments that we believe are appropriate for utility investment include MUDs, low-income communities, workplaces, and DC fast chargers.

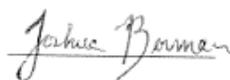
Question 5.5: If the utilities are allowed to develop managed charging programs what guidelines should be developed for this participation? If not why not?

We believe the following principles can help to delineate the appropriate role for utility engagement on EVs: Utility investments for which the utility will seek to recover costs from customers should:

- (a) effectively use price signals and load management practices to maximize benefits to the system, electricity customers and EV drivers, including facilitating the integration of renewable resources;
- (b) provide equitable deployment of services, including commitments to disadvantaged communities;
- (c) foster a competitive market and the engagement of third party vendors of EV supply equipment and services in a manner that supports continued growth of the broader EV charging industry; and
- (d) increase access to EV charging beyond single-family homes with a focus on multi-family dwellings, workplaces, and public high-power “fast charge” locations, in order to improve EV adoption and awareness.

Thank you for your consideration.

Respectfully submitted,



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