Center for Carbon-free Power Integration
Electric Vehicle R&D Group
221 Academy Street
Newark DE, 19716-3501

September 20, 2018

New Jersey 2019 Energy Master Plan (EMP)
Building a Modern Grid Stakeholder Meeting
September 24, 2018

SUMMARY OF UD EV R&D PUBLIC COMMENT

For over 20 years, the University of Delaware's EV Research and Development Group (EV R&D Group) has investigated and promoted EV market penetration. The Group has also invented, demonstrated, and licensed vehicle-to-grid (V2G) technology where, in addition to managed charging, EVs can be used as storage to respond to grid demand. Given our experience in this field, the Group – represented by Principal Investigator (PI) Willett Kempton – will be attending and speaking at the September 24, 2018 NJ EMP Stakeholder Meeting on "Building a Modern Grid" in New Jersey.

New Jersey has set a goal for energy storage of 600 MW by 2021 and 2,000 MW by 2030. V2G-enabled electric vehicles can help reach this goal at a lower cost than relying solely on stationary storage.

Additionally, V2G-enabled EVs (known as "grid-integrated vehicles," or GIVs) can help achieve a variety of EMP goals, including cleaner transportation and greater renewable energy integration. The grid services they can provide include smoothing the variability of solar and wind, balancing the continual fluctuations of supply and demand, and reducing the need for expensive natural gas plants at peak demand times. The income from these services will reduce the cost of vehicle ownership thereby enabling more New Jerseyans to drive EVs. Simultaneously, these services reduce the cost of electricity to all ratepayers by reducing the need for new electric system infrastructure development. Thus, GIVs help prepare for greater EV adoption.

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Enabling GIVs so that NJ can capitalize on these benefits requires the following policy actions (which will be explained in detail at the Stakeholder Meeting):

1. Adopting the electric standards specifically designed to allow the safe interconnection of GIVs
2. Raising of Fast-Track Interconnection Limit from 10 to 25 kW
3. Including GIVs in the NJ definition of "storage"
4. Addressing the accounting issues raised by FERC Order 841
5. Allowing for retail credit-for-export in utility tariffs

Respectfully,

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