CHARGEVC
BETTER TRAVEL, STRONGER GRID.

November 30, 2017
TO: EVSTAKEHOLDER.GROUP@BPU.NJ.GOV
FR: Pamela Frank, ChargEVC
RE: Task 2: Answers to questions posed by Staff

Background:

On September 15, 2017, the Board of Public Utilities (BPU) convened its first stakeholder meeting on Electric Vehicle Infrastructure. This stakeholder meeting followed the BPU's acceptance of the Regulatory Assistance Project Report (RAP Report) entitled "Getting from Here to There: Regulatory Considerations of Transportation Electrification," after which Staff was directed to initiate an Electric Vehicle (EV) Infrastructure stakeholder process.

At the September 15th meeting, staff circulated questions and asked stakeholders for input. ChargEVC submitted answers to the first set of questions in a memo submitted to the EV Stakeholder Group on October 16, 2017.

The following comments are provided to the second set of questions.

The comments below are submitted on behalf of ChargEVC, an electric vehicle coalition that works to accelerate the adoption of electric vehicles in New Jersey. ChargEVC has twenty-six members including technology companies, utilities, third party suppliers, environmental not-for-profit organizations, community labor and consumer advocate organizations, and original equipment manufacturers (OEMs). For more information, please see chargevc.org.

Questions: What goals for EV Infrastructure should be established?

ChargEVC has spent the last year studying the EV market. Recommended goals for EVs, and EV related infrastructure are included in the Roadmap published last September, and are attached here for reference.

We reiterate here the importance of setting goals, which has been done by every other leading EV/ZEV state. We recommend:

- At least 330,000 PHEVs registered in NJ by YE2025;
- At least 2,000,000 PHEVs registered in NJ by YE2035;
- At least 90% of light duty vehicle sales are PHEVs in calendar year 2040;
- State owned fleet: At least 40% PHEV by 2025; 100% by 2035;

- At least 100 DCFC with at least 2 independently operable DCFC units at each location on NJ corridor roads by 12/31/20;
- At least 200 DCFC with at least 2 independently operable DCFC units at each location at NJ community locations by 12/31/20;
- At least 500 L2 EVSE by 12/31/20;
- At least 50% of MUDs offer at least one L2 for use by residents by 12/31/25; increasing 100% of MUDs offering L2 in proportion to EV ownership by 12/31/35;
- At least 25% of commercial properties offer at least one L2 by 12/31/25;
- At least 50% of overnight lodging establishments offer at least one L2 by 12/31/25.

What role should the Board, other government agencies; electric utilities, non-governmental organizations and the private market have in addressing EV/infrastructure adoption?

The transformation of transportation fueled by electricity is highly complex and crosses many policy areas – transportation, energy, economic development and environmental policy. This will require state agencies' involvement, as well as coordination, cross organizational and cross sector planning.

Further, the most efficient development ecosystem will require both the utilities and competitive solution providers to have a role. The centrality of our electric distribution system to this effort necessitates the involvement of utilities. The policy goal should be finding the right balance between the competitive and regulated participants that accelerates transportation electrification while at the same time maintaining a robust, competitive and innovative EV charging market in New Jersey. Please see the Roadmap for further discussion.

What is the present status of EVs and EV infrastructure in New Jersey?

EV sales have accelerated in New Jersey over the last year and presently exceed national growth. Specifically, 2016 EV sales grew 79% in New Jersey over 2015. However, it is notable that New Jersey lags other adoption leaders by almost a factor of two, which demonstrates untapped potential for increasing EV penetration.

Based on the federal U.S. Department of Energy (USDOE) national database[1], as of November 2017, there are 217 PEV public charging stations, supporting 509 plugs.[2] This translates to charging asset density factors as summarized in the following chart.

[1] The US DOE Alternative Fuels Data Center, at https://www.afdc.energy.gov/locator/stations/
[2] This figure does not include workplace and residential charging which are restricted and therefore not generally available to the public.

	Total Count	Per 1000 People	Per Plug-In Vehicle
Public Electric Charging Stations	217	0.0241	0.0204
Public Charging Plugs	509	0.0568	0.0480
Public Station/Plug Types	**Total Count**	**Stations/1000 People**	**Plugs/Plug-In Vehicle**
Low Power (Level Two, J1772)	166/324	0.0185	0.0305
High Power (DCFC – Tesla)	7/46	0.0008	0.0043
High Power (DCFC – CCS)	33/40	0.0037	0.0038
High Power (DCFC – ChaDEMO)	30/33	0.0033	0.0031
Note: Individual asset types (level two, Tesla, etc.) do not sum to the totals shown since some stations include plugs for multiple vehicle types. (DCFC = Direct Current Fast Charger)			

However, these figures overstate the status of public charger infrastructure in New Jersey, since not all stations/plugs are available at all times, nor do all stations support the full range of technical standards that current PEVs require. As an example, the TESLA charging stations may only be used with TESLA vehicles. Given these conditions, it is highly likely that an EV driver in New Jersey would be unable to use one of these stations for either commercial or technical reasons. As discussed and substantiated in greater detail in the ChargEVC study, compared with other states with higher levels of PEV adoption, these infrastructure density levels are relatively low.

Please see the ChargEVC Roadmap and EV study (to be released in early December) for more discussion and information.

What EV/EV infrastructure developments can be expected in the short/medium term under a Business as Usual scenario?

The ChargEVC study models a BAU scenario with respect to how many PEVs will be on New Jersey roads. The salient point however, is that without policy action to accelerate and guide market development, we risk New Jersey being short-changed on potential benefits at best, and harmful impacts at worst. Given the results of the benefits cost analysis in the ChargEVC study, there is no good reason for New Jersey to delay policy and program implementation to accelerate this market. Please see the ChargEVC Roadmap and the study for more discussion.

We appreciate the opportunity to provide comments and will make ourselves available to discuss further.