

New Jersey Electric Vehicle Infrastructure Stakeholder Group Proceedings



presented to:

New Jersey Clean Air Council

presented by:

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New Jersey Board of Public Utilities

Office of Policy and Planning

April 2018

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NJBPU

OFFICE OF POLICY & PLANNING

- Established in 2017:
- Assist the Board's Commissioners and Staff with energy-related policies.
- Works with state and federal agencies on energy matters impacting New Jersey.

Energy Resilience Bank

Microgrid

Smart Grid

Alternative Fuel Vehicles

Energy Master Plan

RGGI

Offshore Wind

www.nj.gov/bpu/about/divisions/opp

MAY '17: THE BPU COMMISSIONS THE REGULATORY ASSISTANCE PROJECT REPORT



Getting From Here to There:
Regulatory Considerations
for Transportation Electrification

- Cited the increase in availability of Plug-In Electric Vehicles and issues for regulators/electric utilities.
- Raised numerous EV & EV charging policy questions.
- Recommended a stakeholder process to help develop policy.

<http://nj.gov/bpu/pdf/reports/RAP-NJ-BPU-electricvehicles-policymemo-may2017.pdf>

AUGUST 2017 BOARD ORDER

Directed Staff to:

- Establish an informal stakeholder proceeding.
- Examine issues including rate design, emerging technology, regulatory issues, resale of electricity, etc.
- Focus: not necessarily EVs, but the electric distribution system infrastructure changes needed to facilitate EV adoption.
- Prepare and present a draft report to the Board.
- Web page:

nj.gov/bpu/about/divisions/opp/altfuelvehicle.html

- Email: EVStakeholder.Group@bpu.nj.gov

DISCLAIMER

- This presentation:
 - Provides a summary of stakeholder commentary.
 - Does not offer any BPU Staff opinions or recommendations.
- A draft Staff report with a summary of the stakeholder process and Staff recommendations will be provided to the Board in April.
- If accepted by the Board, staff will request comment on the draft & final report.

STAKEHOLDER MEETINGS 1 & 2

Sept. 2017

- Summary of NJ Energy Plan on EVs
- Current State of Play in NJ
- Market Trends
- Recent Activities
- Regulatory Assistance Project Report & Board Order
- Key Questions
- Open Discussion

Oct. 2017

- Stakeholder Presentations
 - ChargEVC
 - Atlantic City Electric
 - NJ Division of the Rate Counsel
- Key Questions
- Open Discussion

All presentations and comments:

<http://www.bpu.state.nj.us/bpu/agenda/stakeholdercomments.html>

STAKEHOLDER MEETINGS 3 & 4

Nov. 2017

- BPU: Opening Remarks
- Presentations
 - NJBPU: Summary of Stakeholder Comments
 - NJBPU: Staff Position on Task 1 Questions
 - ChargePoint:
 - Utility Role in Charging
 - EVgo: Fast Charging
 - ChrgEVC: EV Market Study
 - Con Edison SmartCharge NY
- Open Discussion

Jan. 2018

- BPU: Summary of Task 2 Questions
- BPU: Introduction of New Task 1.1 Stakeholder Questions
- Con Edison: Smart Charge New York
- DEP: VW Mitigation Trust Update
- ChrgEVC: EV Market Study

PRESENTERS OR COMMENTERS

- NJBPU Staff
- Rate Counsel
- ChargePoint
- JCP&L
- NRDC
- Greenlots
- Green Spot
- ChrgEVC
- Businovation
- EV Connect
- NJDEP
- Sierra Club
- BYD Motors
- Tesla Inc.
- AF Mensah Inc.
- Office of the Attorney General
- New Jersey Clean Cities Coalition
- Charging Ahead Consulting Services
- Con Edison of New York
- EVgo Services LLC
- University of Delaware
- Stevens institute of Technology
Center for Intelligent Networked Systems
- Atlantic City Electric
- General Motors
- Alliance for Transportation Electrification

TASK 1 QUESTIONS

- Do EVs fall under the definition of demand side management and energy efficiency as set forth in NJ statutes?
- Should owners and operators of Electric Vehicle Supply Equipment (EVSE, aka EV chargers) that provide electric vehicle charging service be regulated as electric utilities?
- Are operators of EVSE reselling electricity *or* providing a charging service?

TASK 2 QUESTIONS

- What goals for EV Infrastructure should be established?
- What role should the BPU, other agencies, electric utilities, NGOs and the private market have in EV/infrastructure adoption?
- What is the present status of EVs and EV infrastructure in New Jersey?
- What developments can be expected under a Business as Usual scenario?

FOLLOW-UP TASK 1 QUESTIONS

(DOZENS OF QUESTIONS ON THE FOLLOWING TOPICS)

- Energy Efficiency of Plug-In Electric Vehicles.
- USDOE – AFDC Findings.
- Electric Systems Impacts: How Much and When?
- Grid Integration, Demand Response, Vehicle to Grid (V2G).
- EV Charging Stations - State of the Competitive Market.
- Utility Role in “Charge Ready” (Charging Station Infrastructure).
- Advanced Metering Infrastructure (AMI) - Smart Grid / Smart Meters.

COMMON COMMENTS

- Stakeholders universally do not want EVSE operators to be regulated as public utilities or to be considered as “reselling” electricity.
- Stakeholders overwhelmingly recognize that EVs are far more efficient than conventional vehicles, but not always in the context of BPU or utility energy efficiency filings.
- EVs are essential to meet GHG reduction goals.
- A substantial increase in EV charging opportunities is needed to support EV adoption.

COMMON COMMENTS

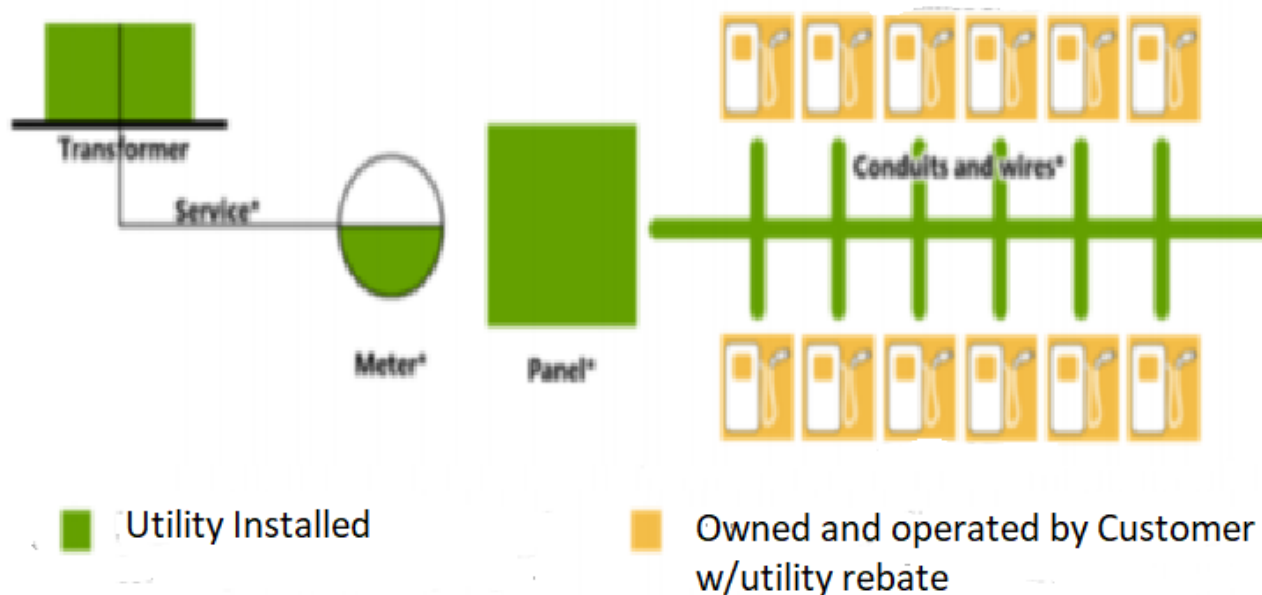
- Most stakeholders urged accelerated efforts by utilities in various aspects of electric vehicle charging, with Rate Counsel advising against most utility involvement.
- Utilities are *uniquely qualified* to plan and implement EV charging networks.

COMMON COMMENTS – CHARGING MARKETS

- Strong recognition that there is a lack of a competitive market in multiple segments of the EV charging business, particularly in multi-unit dwellings (MUDs) and low/moderate income communities. The DCFC and workplace segments were also commonly cited.
- Strong support for utility intervention in underserved markets, in all markets, retail operations, *and/or* infrastructure construction.
- Strong support for utilities to contract with competitive vendors whenever practical.

COMMON COMMENTS: CHARGE READY

Utilities should build charging infrastructure and offer charging station rebates per the “Charge Ready” approach pioneered by Southern California Edison.



COMMON COMMENTS - MANAGED CHARGING BY UTILITIES

- Utilities should operate managed charging programs, particularly in residential settings, to avoid EV charging and distribution system impacts during peak demand.
- Utilities should implement Time of Use (ToU) rates, while some felt ToU may not be granular enough.
- Managed charging alternatives include: secondary/sub meters, smart meters, whole house ToU, EV-only ToU, EVSE metrology, vehicle metrology, and software vs. hardware.
- No consensus on **how** to manage charging.
- EV charging, particularly managed charging, can bring economic benefits to all ratepayers due to greater distribution system utilization.

COMMON COMMENTS: DEMAND CHARGES IMPEDE FAST CHARGING

Very strong support to address demand charges for fast chargers (DCFC):

- Higher volumetric rates, coupled with lower demand charges.
- Use of battery storage.
- Separate tariffs.
- Aggregation of multiple DCFC demand for the purposes of measuring demand.
- Development of a mechanism to recover true utility distribution system impact costs.

COMMON COMMENTS

- Utilities should offer EV education programs.
- Very strong support for utility pilots, trials and experimentation.
- Noteworthy support that utilities should prepare for medium and heavy duty electric vehicles.

COMMON COMMENTS: DEMAND RESPONSE & V2G

- Stakeholders strongly recognized the role of EVs in demand response.
- Vehicle to Grid (V2G):
 - Many stakeholders recognize the value of V2G but believe the technology is not yet commercially available.
 - Noted experts at the University of Delaware emphasized the present day commercial availability of V2G.

COMMON COMMENTS

- Stakeholders strongly recognize that electrified, autonomous and shared vehicles will come to dominate the market.
- Stakeholders strongly recognize that a business as usual approach by the BPU amounts to opportunity lost, and that BPU must adapt to this new market.
- Stakeholders strongly supported the stakeholder process, and urged that there be continuing opportunities to work with BPU to develop the market.

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