New Jersey Electric Vehicle Infrastructure Stakeholder Group Kickoff Meeting

prepared by

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September 15, 2017
AGENDA

• Opening Remarks – Mike Winka
• Summary of NJ Energy Plan on EVs
• EVs and EV Chargers – Current State of Play in NJ
• EVs and EV Chargers – Market Trends
• Recent BPU & State Activities
• Regulatory Assistance Project Report & Board Order
• Key Questions
  • Goals
  • Stakeholder Roles
  • EVs as Energy Efficiency
  • Resale of Electricity
• Next Steps
• Stakeholder Comments
ALTERNATIVE FUEL VEHICLE (AFV) ELEMENTS IN NJ ENERGY MASTER PLAN

High level support:

• Implement cost effective new technologies that advance economy and environment, but have yet to penetrate the market

• Develop policies and incentives to promote AFVs

AFV Related Comments on the 2015 EMP Update

• Virtually all comments by individuals, business groups, environmental groups, utilities, and trade associations urge state AFV action

2011 EMP AFV Work Group Report Remains Relevant
NJ HISTORY WITH EVs

• The most significant incentive is a sales tax exemption for zero emission vehicles

• NJ’s Low Emission Vehicle (LEV) “California Car” program – operated by NJDEP.

• NJ history with AFVs includes 1998 Executive Orders (Gov. Whitman) establishing an AFV task force.
12,765 NJ PEV REGISTRATIONS
SOURCE: DEP, JULY 2017

Electric Vehicle Registrations in New Jersey

~1% of new vehicle sales
213 electric stations
509 charging outlets
in New Jersey
Excluding private stations

Download spreadsheet of matching stations

Location details are subject to change. We recommend calling the stations to verify location, hours of operation, and access.
**EV MARKET TRENDS**

- Battery prices dropping – leading to near term capital cost parity. EV life cycle cost parity approaching.

- First long range “Mass Market” EVs arriving in NJ - Chevrolet Bolt (Spring 2017) and Tesla Model 3 (early 2018).

- OEMs and new participants continue to enter the market.

- Competition from low gasoline prices & improving ICE efficiency.
Total addressable market for vehicles with a 200-mile range. Salim Morsy; BNEF
MOBILITY MEGATRENDS
AUTONOMOUS, CONNECTED, ELECTRIFIED, AND SHARED “ACES” (MCKINSEY)

BPU’s Involvement will need to meet the market
BPU ACTIVITIES

- Established a State AFV Workgroup
- Public Educational Presentations
- Supporting DEP/BPU Workplace Charging Grants
- Monitoring Volkswagen "Dieselgate" Settlement
- Supporting NJ Treasury’s pending Aggregate EV Purchasing
BPU ACTIVITIES
UTILITY ENGAGEMENT ON DOE GRANT APPLICATIONS
BPU ACTIVITIES
RAISING AFV AWARENESS FOR FIRST RESPONDERS

Incident Management Task Force Meeting

Agenda
1. Welcome and Introductions
   Alternative Fuel Vehicle Demo
   CNG Trash Truck - Gary Deitrich, Maintenance Manager, Republic Services
   2012 Ford C Max Energi Plug-in Hybrid & 2010 Ford Fusion Hybrid
   - Mike Hornsby, Chief Technology Officer, NJBPU & Lieutenant, Princeton Junction Vol. Fire Company
Preparing for an EV Market—Electrification Goals and Benefits

Charging Infrastructure

Rate Design

Vehicle-Grid Integration

Defining the Role of Monopoly Service Providers

Licensing Third-Party Charging Services

Market Transformation and the Role of the Utility
The EV market is changing - utility-regulatory policy has to catch up

- $Tesla Market Cap > $Ford (and GM) Market Cap
- Battery prices plummeting
- Vehicles are becoming autonomous & shared

States are helping to drive the EV market: rebates, mandates, policies, tariffs, plans, setting goals, coordinating gov’t efforts, involving stakeholders

Utility commissions—in their oversight and guidance relationship with electric utilities—are in a position to direct the pace and scale of transportation electrification
1 gallon of gasoline = 120 megajoules (MJ) of energy = 33.33 kilowatt-hours (kWh) of electricity

takes you 25 miles in an average gas car for an efficiency of 4.8 MJ / mile.

2015 Honda Accord

takes you 114 miles in an average electric car for an efficiency of 1.1 MJ / mile.

2015 Nissan Leaf

A 78% reduction in end-use energy consumption.
For Immediate Release:
August 23, 2017

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NJBPU Continues with Christie Administration Energy Master Plan’s Policies Supporting Advancement of Alternative Fuel Vehicles

-BPU initiates stakeholder process to examine potential impact widespread adoption of electric vehicles might have upon the state’s electric distribution system-
Do EVs fall under the definition of demand side management and energy efficiency as set forth at N.J.S.A. 48:3-51 and/or N.J.S.A. 48:3-98.1.d.?

Should owners and operators of EVSE that provide electric vehicle charging service be regulated as electric utilities? Are operators of EVSE reselling electricity or providing a charging service?
What goals for EV Infrastructure should be established?

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

- 10/16/17: Stakeholder Meeting: 10:00 AM – 12:00 PM @BPU
- 10/16/17: Task 1 Questions comment period closes 5:00 PM
- 11/15/17: Stakeholder Meeting: 10:00 AM – 12:00 PM @BPU
- 11/30/17: Task 2 Questions comment period closes 5:00 PM
- 2/23/18: Draft Report Due to Board
- Public Comment

- Stakeholder meeting location: NJBPU – Multi Purpose Room, 44 South Clinton Avenue, Trenton (near Trenton Train Station)
- Representative future topics to include utility role in EV infrastructure, rates and grid integration