Rhode Island Power Sector Transformation – Beneficial Electrification
Newport Solar

Utility Role in PEV Adoption

When considering the goals of the Power Sector Transformation with respect to Beneficial Electrification, Newport Solar does not feel the most advantageous assumption would be one that defines the utility as having or operating an electric vehicle (EV) business. Newport Solar does, however, believe it would be beneficial for the utility to replicate current models in energy efficiency and renewable energy program administration to encourage EV businesses and efficient markets.

Research has shown that the hurdles to electric vehicle adoption do not exist in the need for energy supply upgrades, distribution system upgrades, or interconnection process, as suggested by the stakeholder questions provided by DPUC. Most market indications suggest that the barriers to EV adoption include price and incentives, range anxiety, and general education on EV financial value and usability.

There are opportunities for the utility to provide guidance and administrative support for electric vehicle adoption:

- Track deficiencies in product capability and provide information to manufacturers, distributors, and developers as a signal to development (examples: EV charging deficiencies, grid asset deficiencies, etc.)
- Development and communication of incentives towards PEV adoption
- Data collection- work with DOT and other governmental or non-governmental organizations to plan for distribution system upgrades to enable EV associated asset deployment (example: highest driving density to inform charging station locations)
- Assist in developing budgets for funding system upgrades necessary to enable mass charging
- Execute marketing strategy to facilitate the adoption of EVs by communicating incentives, financial value, and usability; exercise learnings from energy efficiency models
- Track metrics of success (example: installation of distribution assets to encourage EV charging, percentage of incentives consumed)
- Educate consumers; National Grid is likely one of the few organizations in the state that has everyone's contact details. Leveraging this list to communicate the benefits of these programs would help kick start the program (example: comparative energy reports on electric bills that National Grid currently sends to customers regularly)

Other Players & Respective Roles

PEV Manufacturers

- Including feedback from market participants (National Grid installers, EV owners) in product capability development efforts

PEV Dealerships

- Educate consumers on current programs, incentives, and usability of product
- Coordinate with National Grid to communicate programs
- Provide data on adoption rate of PEV as a metric of success

EV Infrastructure Companies:

- Ownership of charging stations- a competitive market will meet goals more efficiently
- Communicate capabilities of product (chargers) and their interaction with utility business model changes (time of use rates, demand charges, etc.)

Relevant circumstances in considering investments:

Most people in Rhode Island drive less than 100 miles per day, whereas most EVs have over 100 miles of range per charge. Therefore, the majority of miles driven in Rhode Island will be charged at residences. An average 40-amp Level 2 charger can add 25 miles of range per hour. If an individual is at home for 8 hours at night, that represents 200 miles of charging. In summary, consideration of investments of both time and money on grid scale infrastructure should take second seat to investment in development and communication of incentive structures and PEV usability.