Regular Meeting, Electric Vehicle Charging Stations Infrastructure Commission

September 28, 2018

Senator Watters opened the meeting at 9:07 a.m.

Introductions

Commission members present: Senator David Watters, Representative George Sykes, Representative Steven Smith, Rebecca Ohler (NHDES), Peter King (BIA), Richard Bailey, Jr. (NHDOS), Carleton Simpson (Unitil), Gary Lemay (Drive Electric NH), Jared Chicoine (OSI), David Rodrigue (NHDOT), Charlotte Ancel (Eversource), Kevin Miller (ChargePoint), and Dan Bennett (NHADA).

Commission members absent: none

Approval of Minutes from August 24, 2018

Representative Smith moved to approve the minutes from August 24, 0218; seconded by Gary Lemay, no discussion. Motion passed with all in favor of approving the minutes.

Presentation by Charlotte Ancel (Eversource)

Charlotte Ancel is the director of clean energy strategy and policy for Eversource. She spoke about Eversource's Clean Energy Initiatives program presented information on what Eversource as an electric supplier thinks about the transition to electric vehicles (EVs).

The presentation hit upon the following three points:

1. **EVs will be cost competitive in the next two to five years**
   Once there is cost parity to internal combustion engine (ICE) vehicles, the low cost of maintenance and fuel will cause more drivers to shift to EVs.
2. **There are benefits to all electric customers from increased adoption of EVs.**
   As more electricity is purchased, the cost of supplying that energy will be spread out and the unit price of electricity goes down. Benefit to cost ratio (BCR) calculations using assumptions from an EV infrastructure program completed in Massachusetts show every $1 invested has a $1.20 rate-reducing benefit over the life of the infrastructure, and a positive benefit after year 7.
3. **It is important that we think through and manage the transition to avoid unintended consequences.**
   Eversource has a plan to increase Level 2 and DC Fast charging infrastructure in Massachusetts by 255%. Their focus in on travel corridors and siting is being done in coordination with investments by MA DOER and Electrify America, and in partnership with local businesses. They are ensuring 10% investment in environmental justice communities. The goal is to go from initial conversation to final installation within 90 days after site selection. Eversource is also working on Fleet Ready Pilots to prepare for the medium to heavy duty fleet electrification, which they predict will mature within the next six to ten years. They do no recommend a statewide MD/HD focus in NH right now, but should work with targeted fleets.

Presentation by Gary Lemay (New Hampshire Electric Cooperative)

Gary Lemay is the renewable energy engineer with New Hampshire Electric Cooperative (NHEC) and he spoke about the programs available to NHEC members to encourage electric vehicle adoption.

1. **2013 Commercial EV Charger (first EV program)**

   In 2013 NHEC installed seven chargers at six locations and covered 50% of the installation cost. The sites were typically hospitality locations (restaurants, hotels, etc.) and were open to the public. They were required to supply the charge for free for the first year, but all the locations found the cost of charging to be minimal and continue to offer it for free. In 2017 the EV charger incentive became a standard commercial incentive program. The 2018 incentive remains 50% of installed cost up to $2,500 per charger with two chargers allowed at each member per year.

2. **Electric Vehicle Rebate**

   In 2017 NHEC started an EV rebate pilot program that offers $300 for electric motorcycles, $600 for Plug-in Hybrid Vehicles (PHEVs) and $1000 for Battery Electric Vehicles (BEVs). Over 40 incentives were provided to members in 2017. NHEC made the BEV and PHEV incentive program standard in 2018 and have exceeded last year's incentives already this year.

3. **Residential Charging Incentive**

   NHEC provides a $300 rebate to members who install a Level 2 EV charging station. The charger is separately metered and that meter must be on a Time of Use rate. Customers have an off-peak EV charging rate is $0.08676 per kwh from 9pm-7am and an on-peak EV charging rate of $0.22503 per kwh. This sends a strong price signal to members to charge during off-peak periods. The basic residential rate is $0.14860 per kwh. By educating customers to charge during off-peak the Coop thinks they will reap longer term benefits.

Gary mentioned some corridors and communities in the NHEC area that he thought would be good locations for charging to support in-state and regional vehicle travel. NHEC recommends DC fast chargers at 50 mile intervals (only 3 in NH right now) Corridors included I-93 from exit 25 through Lincoln, NH and Routes 16, 302, 25, and 11. Communities mentioned were North Conway, Lincoln/Woodstock, Meredith, Plymouth, and Alton.

NHEC plans to continue the residential and commercial charging programs through 2019 and likely beyond. NHEC believes electric vehicle usage will continue to increase, and intends to be proactive in promoting their adoption. NHEC would like to work on a plan to develop and install EVSE signage on NH highways. NHEC will work with Towns, the State of NH, and HVDC charger developers in their service area to promote the installation of chargers.

Discussion during the presentation included:

- Cost of installing a residential charger (if the member gets $300, what is their out of pocket cost?). Ranges from $1000 to $1,500 depending on what wiring is necessary.

- Were there any impacts for the commercial businesses offering free charging (i.e. without an incentive to leave where the spaces often blocked)? Gary did not have the exact data but had not heard that any of the businesses had this issue.

Presentation by Huck Montgomery (Liberty Utilities)

Huck Montgomery is the Government Affairs Manager at Liberty Utilities (Liberty), which provides electricity for 44,000 customers in New Hampshire and is the biggest supplier of natural gas in New Hampshire. Huck presented on Liberty's views on the electrification of the transportation fleet. The following are the major points presented:

1. **Liberty is introducing a battery storage pilot program.**
   This program will pair with a time of use (TOU) rate to encourage charging the battery bank during off peak for use during on peak times (including for charging a vehicle).

2. **Liberty plans to propose a new EV charging rate at next rate case.**
   They hope for this rate to be lower than the TOU rate in the battery storage program. Decoupling would make this easier

3. **Liberty currently uses clean vehicles in its fleet.**
   They currently have 2 full size pick ups and have charging infrastructure at all their facilities.

4. **Liberty encourages the commission to consider hydrogen fuel cell (HFC) technology as another source for zero emission vehicles.** Fuel cell are zero emissions and don't require clean electricity generation in order to reduce greenhouse gases. Currently the feed stock for HFC is methane (or natural gas) and the best way to produce the hydrogen for the fuel cells is to pipe the gas to the station and have the process to break the molecules occur on site. Since natural gas pipelines are available in many locations, this would limit the amount of infrastructure needed. Additionally, using water for the feedstock for HFC is not currently economical, but as the technology increases in may be in the future. Huck suggests that electricity created by renewable sources when the grid does not need it could be used to create the hydrogen needed for HFC from water.

5. **Hybrid vehicles are not that efficient due to the two drivetrains that are created during production of the vehicle.**

Presentation by Carleton Simpson (Unitil)

Carleton Simpson is the Director of Government for Unitil, which provides electricity and natural gas for about 182,000 customers over three different states. Carleton presented on Unitil's policies concerning EVs, the following are the three main points from the presentation:

1. **Locations for Charging**

Third parties in the private sector have begun to provide public charging. A key consideration is make-ready infrastructure to ensure the grid can supply added EV loads. The commission might determine whether a "road map" of EV corridors makes sense (public, parking lots/parking garages, destinations, homes, businesses)

2. **Rate Structure for Charging**
   Per SB 575 (relative to electric vehicle charging stations) the PUC will determine whether it is appropriate to implement EV rate design. Consider variables such as cost of service, load management techniques, time of use residential and commercial customers.

3. **Determination of Market Segments for EV Adoption**
   Analyze state, local, and private fleets that could represent appropriate applications for electrification.

4. **Priorities for SB 517 Commission**
   Step One: develop customer confidence in the capabilities of EVs and alleviate range anxiety;
   Step Two: provide transparent and understandable pricing models;
   Step Three: electrify appropriate vehicles in local fleets

Discussions:

There was a discussion on what maintenance was required for EVs.

There was a discussion on an ROI model for charging infrastructure.

There was a discussion on EVSE signage and why signage on the highway was needed. Such signage serves customers in low cell phone signal areas and help to create awareness of charging availability to non EV owners.

Senator Watters introduced Emily Wier from Greenlots who was present to make public comment. Greenlots is an open standards charging software company that works with hardware companies to install charging infrastructure. Emily wanted to introduce herself and Greenlots who are working on the Electrify America buildout across the United States. She supports future coordination on the subject of EV charging and looks forward to engaging with the commission in the future. Senator Watters said that we would have a session where hardware and software companies would present relevant information.

Senator Watters set the next meeting October 26th, 2018 and suggested that OSI present at that meeting.

Senator Watters asked if there were any additional public comments and there were none.
A motion to adjourn the meeting was made by Representative Smith and seconded by Richard Bailey. Motion passed, all in favor, to adjourn the meeting at 10:45 a.m.