

## Annual Report – November 2019

### Electric Vehicle Charging Stations Infrastructure Commission

#### Senate Bill 517 (2018)

The Electric Vehicle Charging Stations Infrastructure Commission (EV Commission) was established via Senate Bill 517, adopted in the 2018 legislative session. The current Commission members are:

Matthew Mailloux - Office of Strategic Initiatives	Dave Rodrigue - DOT
Richard Bailey, Jr - Dept. of Safety	Rebecca Ohler - NHDES
Kevin Boughan - Eversource	Dan Bennett - NH Automobile Dealers Assoc.
Peter King - Business & Industry Assoc.	David Watters - Senate
George Sykes - House	Steven Smith - House
Gary Lemay - Drive Electric NH	Carleton Simpson - Unital
Kevin Miller - Manufacturers Industry	

The EV Commission is tasked with making recommendations on the following eight areas:

1. The development of zero emission vehicle technology and infrastructure, including private and rental residence, business, and municipal installation of electric vehicle charging stations.
2. The availability of high-speed charging stations and the role of proprietary technology in relation to their availability and use on public property.
3. The development of electric vehicle charging stations, including high-speed charging stations, in state and federal highway corridors and at public transportation hubs and parking garages.
4. New Hampshire joining the Multi-State ZEV Task Force or forming an interstate compact for the development of electric vehicle charging station networks.
5. Legislation on tax credits for private and rental residence and business installation of electric vehicle charging stations.
6. Changes needed to state laws, rules, and practices, including building codes and public utilities commission rules, to further the development of zero emission vehicle technology and infrastructure.

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7. Potential private, state, federal, and municipal funding sources, including grants, the Volkswagen settlement and other settlement funds, and regional greenhouse gas initiative funds.
8. State agency workplace charging.

This report provides an overview of the work of the EV Commission from its inception through October 2019. All meeting materials are available on a webpage hosted by the NH Department of Environmental Services<sup>1</sup>.

The EV Commission met four times in 2018 and seven times prior to November 1<sup>st</sup> in 2019.

**August 24, 2018** - At this inaugural EV Commission meeting elections were held and Senator David Watters was elected Commission Chair and Rebecca Ohler (NHDES) was elected clerk. Senator Watters reviewed the charge of the commission and went over the rules of a commission and the Right to Know law as it relates to the commission. Sarah McKearnan, Senior Policy Advisor with Northeast States for Coordinated Air Use Management, a nonprofit association of air quality agencies in the Northeast, provided a broad overview of the current status of the electric vehicle (EV) market, the basics of EV charging equipment (also known as electric vehicle supply equipment, or EVSE), a review of current planning in the Northeast, opportunities to coordinate infrastructure investment, where charging takes place (home, work, around town, travel corridors, destinations), and key overarching issues.

**September 28, 2018** - The EV Commission heard from representatives of the four major electric utilities – Eversource, Liberty Utilities, Unitil and the NH Electric Cooperative. Collectively the discussion brought out the following information:

- EVs will be cost competitive in the next two to five years;
- There are benefits to all electric customers from increased adoption of EVs;
- It is important that we think through and manage the transition to avoid unintended consequences.
- Incentives (i.e. EV rebates, EVSE rebates) can be effective in increasing electric vehicle adoption rates;
- EV charging rates can be effective at reducing use of electricity for EV charging during peak demand periods; and
- EVs include hydrogen fuel cell (HFC) vehicles, not just battery electric vehicles.

**October 26, 2018** - Matthew Goetz, Electric Vehicle Manager at the Georgetown Climate Center, presented an MJ Bradley & Associates tool developed to assist states in determining the

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<sup>1</sup> <https://www.des.nh.gov/organization/divisions/air/tsb/tps/msp/sb517.htm>

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best places to locate fast chargers (DCFC) along major corridors. The tool utilizes multiple data sets such as traffic volumes, location of existing charging stations, and availability of amenities near highway exits.

Matthew Mailloux and Alexis Labrie from the Office of Strategic Initiatives (OSI) presented an overview of the 2018 Ten Year State Energy Strategy and an overview and update on the status of the Volkswagen Settlement funds (VW Funds), including the state's Beneficiary Mitigation Plan.

The Commission voted to provide guidance to OSI on the use of a portion of the VW Funds by adopting the following statement:

*The Electric Vehicle Charging Infrastructure Commission recommends prioritizing EV charging infrastructure initial investment from the Volkswagen Settlement and other potential sources along the interstate highway system; the NH turnpike system, and other roadways; and prioritized as deemed suitable as determined by OSI, NHDES, and NHDOT in consultation with the commission.*

The Commission's intent is for the statement to be guidance to OSI to place an initial focus on corridor charging, but that there will likely also be investment potential in charging infrastructure in other locations as well. This statement was also intended as a directive to the three agencies to come up with a plan and bring it back to the commission for approval.

**December 7, 2018** - This meeting was designed as a workshop to create a roadmap for the work of the Commission over the coming months that would enable the Commission to provide recommendations on the 8 areas specified in SB 517. Through breakout groups, that included Commission members and attending public, the following top priorities/issues were identified:

1. Provide guidance to OSI on the use of the Volkswagen funds
2. Long-term infrastructure planning should include development of Level 2 charging at key locations
3. State agencies should lead by example through the purchase of EVs for the state fleet.
4. Building codes and zoning ordinances could play an important role by requiring "make ready" in new building and reconstruction projects.

**January 25, 2019** - Becky Ohler (NHDES) presented the work completed by NHDES and NHDOT to identify priority corridors for the development of DCFC infrastructure in New Hampshire: Interstates I-89, I-93, and I-95; and portion of state Routes 2, 3, 4, 9, 11, 16, and 101.

David Rodrigue (NHDOT) presented DOT's proposed signage policy for DCFC on the limited access highway system.

Charlotte Ancel, (Eversource) presented information about heavy duty transit and school bus electrification projects in surrounding states. Preliminary evaluation points to a positive cost/benefit; however, demand charges are a significant issue and strategies must be developed to minimize them.

**February 22, 2019** - Chris Nihan from ChargePoint gave a presentation titled DC Fast Charging in New Hampshire: Capital and Operating Cost Barriers and Opportunities. The presentation provided figures for the installation costs for two 50 kW fast chargers and two 150 kW fast chargers.

- Site acquisition: \$0 – 25,000
- Hardware (DCFC equipment): \$60-80,000 (50 kW) \$90-150,000 (150 kW)
- Electrical panels and switchgear: \$4-20,000 (50 kW) \$12-26,000 (150 kW)
- Engineering, design and permitting: \$3,500 – 12,000 (50 kW) \$7-16,000 (150 kW)
- Utility upgrade: \$2-5,000 (50 kW) \$35-100,000 (150 kW)
- Project management: \$3-10,000 (50kW) \$5-15,000 (150 kW)
- Construction: \$35-90,000 (50kW) \$70-120,000 (150 kW)

The presentation went on to discuss demand charges and how they are a barrier to DC Fast Charging as a business opportunity during the beginning of electric vehicle adoption.

Jon Shaer, Executive Director of New England Convenience Stores and Energy Marketers Association (NECSEMA), shared the perspective of the convenience stores and transportation fuels distributors.

Gary LeMay (NH Electric Coop) discussed some of the barriers to electric utility investment in electric vehicle charging including high infrastructure costs, lack of experienced/knowledge operating EVSE; and lack of knowledge regarding location of EVs.

**March 22, 2019** - Representative from three of the electric utilities in New Hampshire (Carleton Simpson, Unitil; Huck Montgomery, Liberty Utilities; and Kevin Boughan, Eversource) discussed the role of electric utilities in development of EVSE. A joint utility DCFC corridor investment proposal that would utilize a public-private partnership to develop 12 sites with four 50kW DCFC per site on major transportation corridors in New Hampshire was presented.

**April 26, 2019** - Charles Myers, Massachusetts Hydrogen Coalition, provided an overview of fuel cell vehicle (FCV) technology and the associated fueling infrastructure needs. The presentation reviewed the fuel cell concept and current vehicles available on the market, including light duty passenger cars; medium duty delivery trucks; transit buses; and heavy duty class 8 tractor trailers.

Tim White (NHDES) gave an update on the nominations for FHWA alternative fuel corridors.

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May 24, 2019 - Carol Miller (New Hampshire Bureau of Economic Affairs (BEA)) discussed key growth sectors in New Hampshire - healthcare, advanced manufacturing, technology, hospitality, and construction. New Hampshire ranks fairly high among all states for the percentage of workforce employed in technology and technology jobs continue to grow in New Hampshire. BEA recruits businesses, workforce/talent, travel industry, and students into New Hampshire, targeting millennials and commuters from age 28-32 years old, who are also likely to drive electric vehicles. BEA hired Plug-in America to develop a strategic plan for EV infrastructure improvements in NH. Peter O'Connor (Plug-in America) provided an overview of that plan. Plug-in America is working with CALSTART (to address heavy duty fleet needs) and S Curve Strategies (for communications and outreach) on the plan.

Jessica Wilcox (NHDES Granite State Clean Cities Coordinator) provided an overview of the *Drive Change. Drive Electric. Destination Electric* EV awareness campaign recently launched by Northeast states. *Destination Electric* identifies small, unique businesses have EV charging available within walking distance of. In New Hampshire Dover, Portsmouth and Nashua are participating in the program. The goal is to raise consumer awareness of electric cars and the availability of EV charging in that community.

Senator Watters presented the following policy statement developed by the electric utilities that the commission might consider endorsing in advance of any DC Fast Charging Corridor Proposal:

*"The Commission endorses utility electric vehicle charging station and supply equipment 'make-ready' programs that provide streamlined interconnection and behind the meter investment. Such investments are viewed as prudently incurred and just and reasonable capital expenditures by the utility."*

After some discussion, senator Watters decided to share the language with the Office of Strategic Initiatives.

**June 28, 2019** - Matthew Mailloux (OSI) presented a high level overview of the proposal for funding DCFC using VW funds. He stated that the targeted corridors will be in line with the ones presented by NHDOT and NHDES to the commission earlier in the year. In response to this pending Request for Proposals the Commission approved the following statement:

*Recognizing that:*

- *Adequate electric vehicle supply equipment (EVSE) in New Hampshire, and in particular direct current fast chargers (DCFC) along major travel corridors in the state, is necessary to enable electric vehicle (EV) travel within and through New Hampshire; and*

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- *Availability of adequately spaced EVSE along the State's major travel corridors is essential to overcome "range anxiety" and enable and encourage broader adoption of EVs by New Hampshire residents and residents throughout the Northeast; and*
- *Manufacturers continue to introduce a wider variety of EV models which will be available to consumers in the coming years and that drivers will be best served if New Hampshire's EV charging market supports multiple business models, generates new jobs, and encourages innovation and competition in equipment and networks services; and*
- *New Hampshire's Volkswagen Beneficiary Mitigation Plan provides funding for the support of EVSE development within the state; and*
- *Electric utilities have proposed a "make ready" program for New Hampshire that could provide streamlined interconnection and behind the meter investment by the utilities;*

*The EV Commission therefore requests that:*

- *The Office of Strategic Initiatives (OSI), working with the electric utilities and the NH Department of Environmental Services (NHDES), develop a request for proposals (RFP) utilizing the VW settlement funds to spur private sector investment in DCFC, combined with Level 2 charging; and*
- *The RFP should strive to result in adequate EVSE along the priority travel corridors presented by NHDES and the Department of Transportation at the Commission's January 2019 meeting to alleviate range anxiety; and*
- *The RFP should be released in a timely manner with the goal of having EVSE in place on those corridors by the end of 2020; and*
- *The fully regulated electric utilities work with the Public Utilities Commission and EVSE industry stakeholders to design and obtain approval for a "make ready" program for New Hampshire that is designed to work both in conjunction with the RFP and beyond; and*
- *OSI, in collaboration with the EV commission and NHDES, and in consideration of the results of the pending NH Department of Business and Economic Affairs statewide infrastructure plan, work to develop further initiatives for the remaining EVSE fund balance, such as: providing EVSE for state electric vehicles, a statewide Level 2 charging solicitation, EVSE to support fleet electrification, workplace electrification, or other similar efforts.*

October 4, 2019 - Tom Frantz from the New Hampshire Public Utilities Commission (PUC) discussed the PUC role in regulating public utilities that are considered natural monopolies and that are vested with public interest. The PUC ensures that "costs are known and reasonable" and that costs are appropriately reflected in rates. The issue of demand charges was discussed and Mr. Frantz indicated that one option would be for the utilities to propose a separate customer and rate class for EV charging infrastructure, a step that should be done during a utility rate case. Time of use pricing can also impact demand at peak times.

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OSI and DES continue work to develop the RFP for use of VW Trust funds in support of a DCFC network in NH and anticipate release of the RFP in the near future.

The Commission will continue to meet through 2020.

This annual report was adopted by the members of the EV Commission on November 22, 2019.

Rebecca E. Ohler

Clerk, SB 517 Commission