

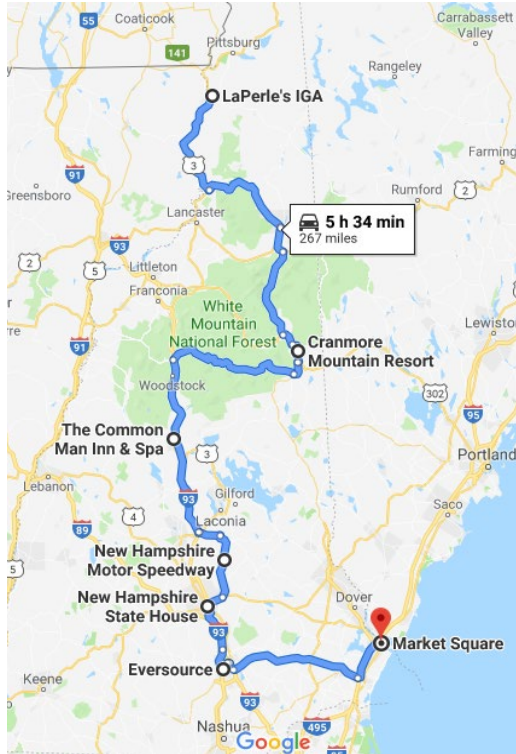


Plug In America

WE DRIVE ELECTRIC. YOU CAN TOO.

September 27, 2019
Bi-State Connector Event
Opening Remarks

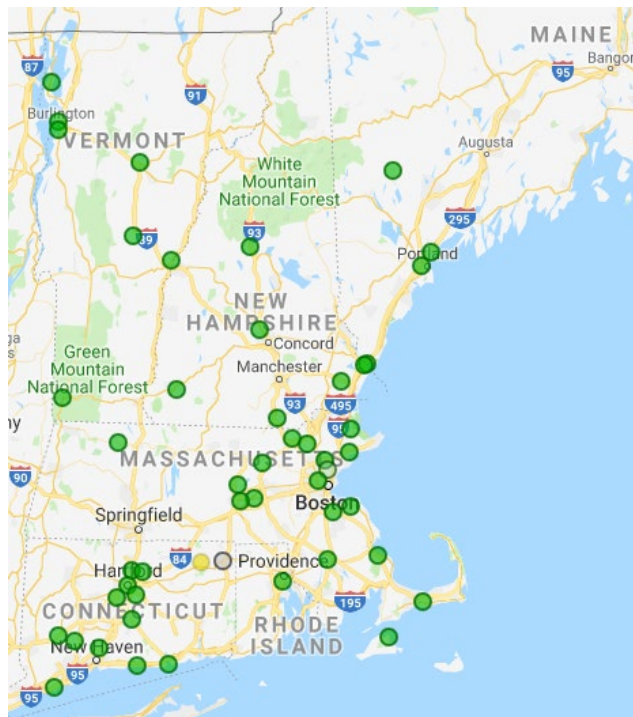
Plug In America



- National nonprofit organization founded in 2008; our members are passionate EV drivers
- The leading national voice promoting and accelerating the rollout of plug-in cars
- The world's deepest pool of experienced EV drivers, with many years of experience and millions of electric miles driven

- Issue Advocacy
 - EV Fees, Consumer Protection/Interoperability
- Consulting/Analysis
- Utility Filings
- Education and Outreach
 - PlugStar, NDEW, EV Support Program

- September 14-22
- driveelectricweek.org
- 47 New England events

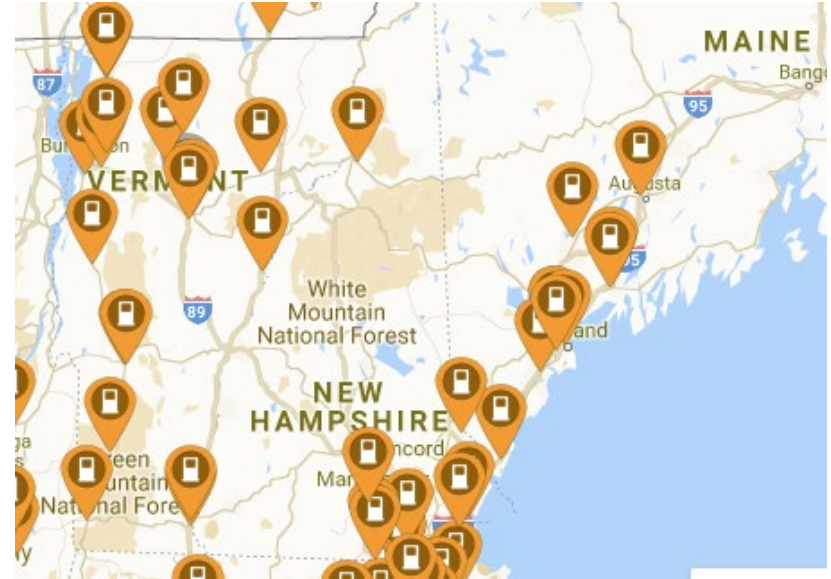
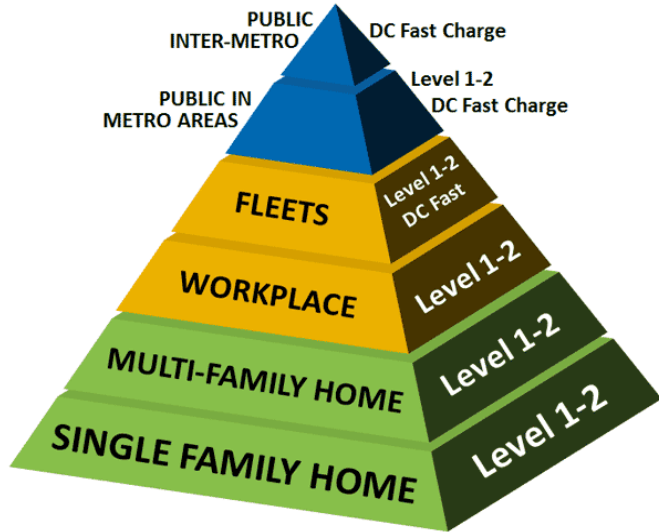


- New England crucial for EV adoption
- NH and VT have seen great activity in past year
 - NH: SB517 Commission, Infrastructure Assessment
 - VT: PUC EV Investigation (18-2660-INV)

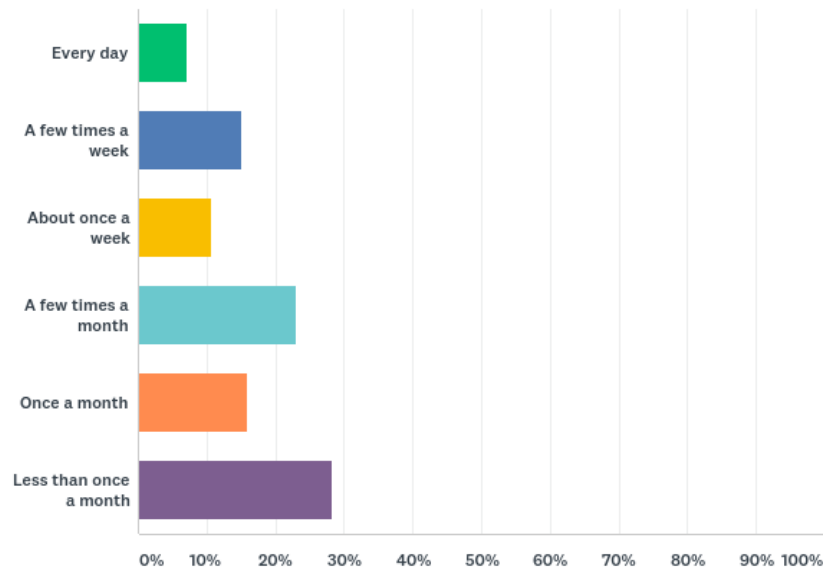
- Funded as part of VW Settlement (Appendix D)
- Examined how to best utilize funds to support economic development



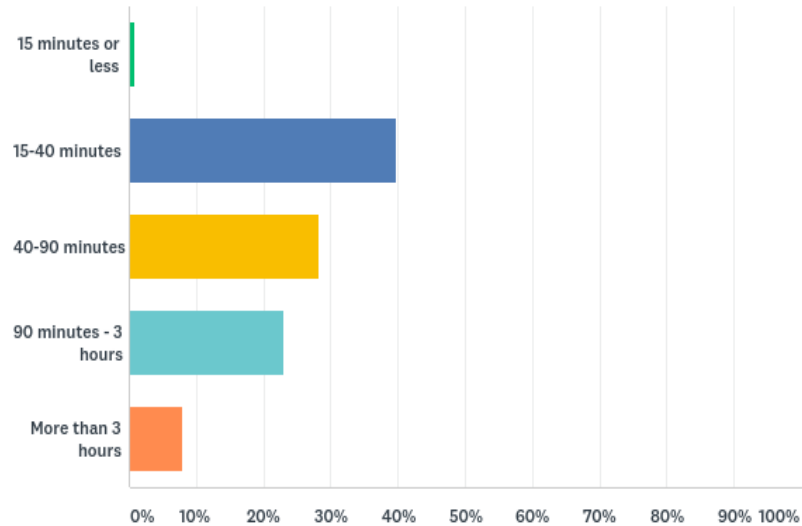
NH: EV Infrastructure Assessment



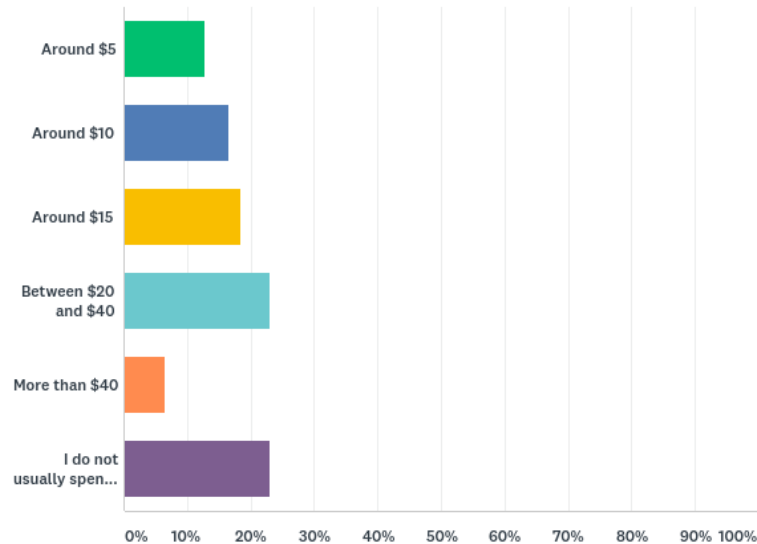
Q6 How often do you use public charging?

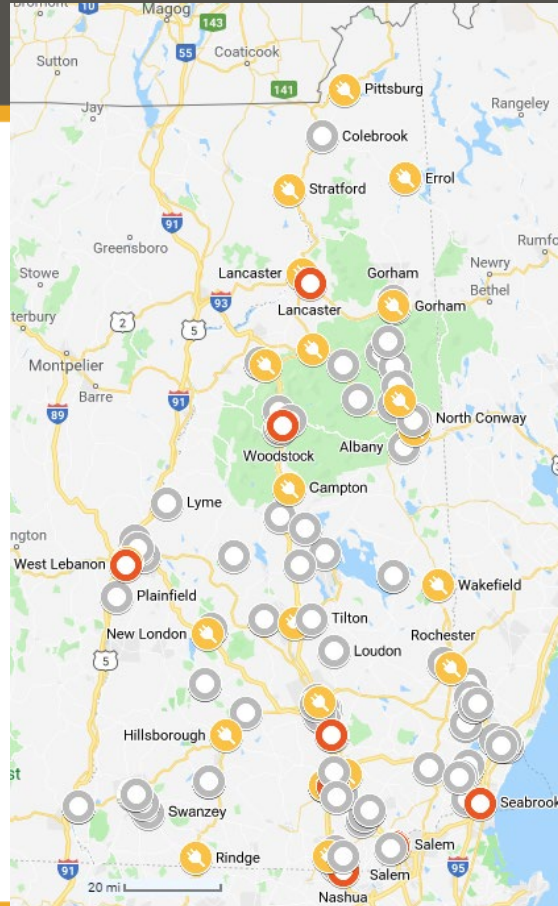





Q7 When you do use public charging, what is the most common length of a charging stop?



Q8 About how much money do you typically spend while stopped for fast charging on a road trip?





-  Proposed Sites
-  Existing Level 2
-  Existing Fast Charging

1. Fund utility concept for DCFC (RFP in development);
2. Authorize utility investment in make-ready infrastructure, encourage off-peak EV charging;
3. EV-ready building codes;
4. NESCAUM consumer protection guidelines or similar for publicly-funded EVSE;
5. Address demand charges;
6. Remaining VW funds for other EVSE categories (municipal, destination, workplace, fleets, residential, multifamily);
7. Coordinated communications campaign to engage potential site hosts;
8. Support local governments in permitting and approving EVSE, with workshops;
9. State ZEV target with grants or rebates for EVs (including medium- and heavy-duty);
10. Think about winter!
 - Greater DCFC density along mountain roads
 - Education and awareness about leaving a margin of safety
 - High reliability and redundancy standards for procurements and grants
 - Consider snow removal patterns in parking lots
 - Support ski resorts in expanding and advertising charging infrastructure.

- Open Access/Payment Options
- Pricing Transparency
- Interoperability
- Uptime and reliability
- Mapping data
- Signage

REPORT TO THE VERMONT STATE LEGISLATURE

SUBMITTED BY THE VERMONT PUBLIC UTILITY COMMISSION TO THE SENATE AND HOUSE COMMITTEES ON TRANSPORTATION, THE SENATE COMMITTEE ON FINANCE, THE SENATE COMMITTEE ON NATURAL RESOURCES & ENERGY, AND THE HOUSE COMMITTEE ON ENERGY & TECHNOLOGY



PROMOTING THE OWNERSHIP AND USE OF ELECTRIC VEHICLES IN THE STATE OF VERMONT

June 27, 2019

- Case No. 18-2660-INV
- Began in July 2018
- Report submitted to Legislature in June 2019

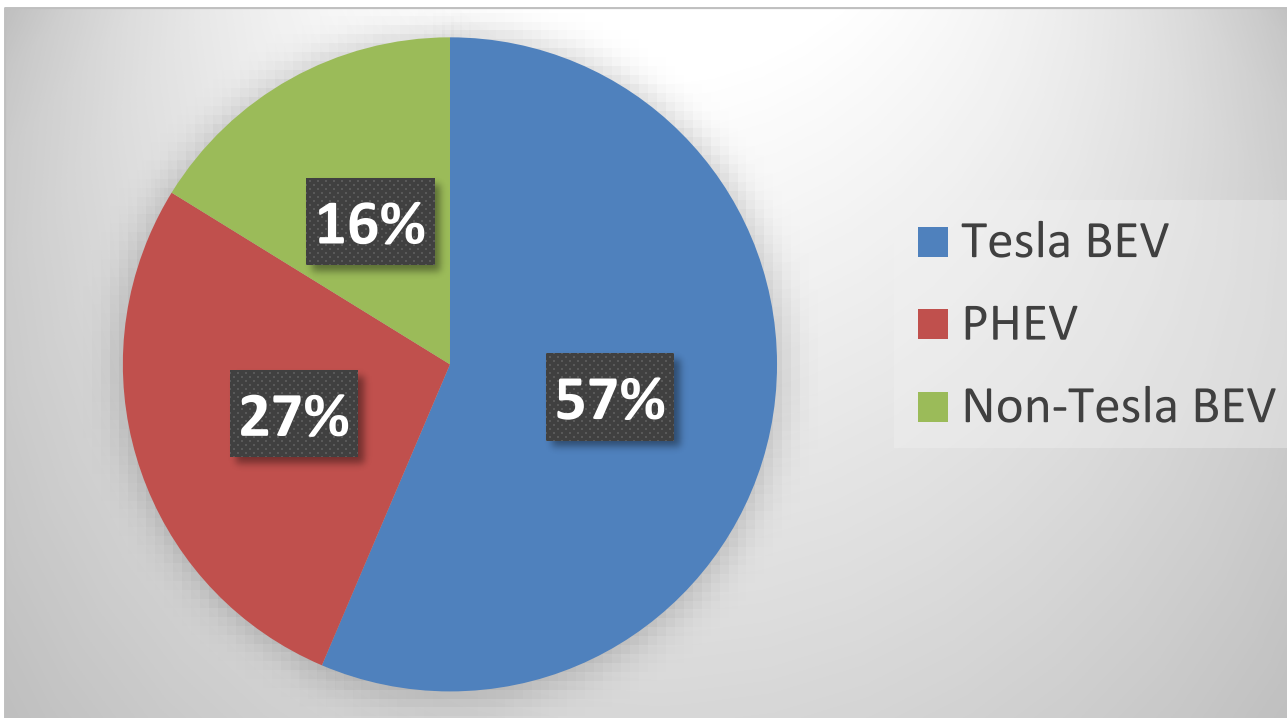
1. Utility Impacts of EVSE
 2. Non-utility-owned charging stations
 3. Everything else
- Thorough process, multiple workshops
 - Continues now with greater investigation into kWh fees

- ~2.5% of light-duty vehicle sales in June 2019
 - 1.5 million vehicles sold
 - 37,818 EVs
- **7%** of passenger car market in June
- CA market share about 8% in 2018
- Several new BEV models this year, including SUV/Crossovers

- 41.4% growth is doubling every 2 years
- Sustained 42% growth will hit state ZEV targets (3.3 million ZEVs by 2025)
- 2018 was up 81% over 2017
- 2019 YTD up only about 7% over 2018

- EV market is growing rapidly (if unevenly)
- States need to be ready

Which Vehicles? Jan-Jun 2019



What Can You Do?

- Buy an EV
 - Learning curves don't happen by waiting
 - Great for fleets with considerable but predictable distance per day
- Talk about your EV
 - EV drivers are the best advocates
- Make your facility EV-ready
 - When doing work on parking lot, electrical infrastructure, etc.
 - Workplace charging a key to expanding EV deployment
 - Multi-family dwellings a harder nut to crack
- Look into available funds
 - VW Settlement Appendix D
 - CMAQ
 - Highway bills
 - Carbon emission reduction programs (e.g. RGGI, TCI)

Thank you!
Pete O'Connor

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Extra Slides

1. Removal or mitigation, as appropriate, of barriers to EV charging, including strategies, such as time-of-use rates, to reduce operating costs for current and future EV users without shifting costs to ratepayers who do not own or operate EVs;
2. Strategies for managing the impact of EVs on and services provided by EVs to the electric transmission and distribution system;
3. Electric system benefits and costs of EV charging, electric utility planning for EV charging, and rate design for EV charging; and,
4. The appropriate role of electric distribution utilities with respect to the deployment and operation of EV charging stations.

1. How and on what terms, including quantity, pricing, and time of day, such charging stations will obtain electric energy to provide to EVs;
2. What safety standards should apply to the charging of EVs;
3. The recommended scope of the jurisdiction of the Commission, the Department of Public Service, and other State agencies over such stations;
4. Whether such stations will be free to set the rates or prices at which they provide electric energy to EVs, and any other issues relevant to the appropriate oversight of the rates and prices charged by such stations, including the transparency to the consumer of those rates and prices; and,
5. The recommended billing and complaint procedures for such charging stations.

1. Jointly with the Secretary of Transportation, recommended options to address how EV users pay toward the cost of maintaining the State's transportation infrastructure, including consideration of methods to assess the impact of EVs on that infrastructure and how to calculate a charge based on that impact, the potential assessment of a charge to EVs as a rate per kilowatt hour delivered to an EV; varying such a charge by size and type of EV; and phasing in such a charge;
2. The accuracy of electric metering and submetering technology for charging EVs;
3. **Strategies to encourage EV usage** at a pace necessary to achieve the goals of the State's Comprehensive Energy Plan and its greenhouse gas reduction goals, without shifting costs to electric ratepayers who do not own or operate EVs; and,
4. **Any other issues** the Commission considers relevant to ensuring a fair, cost-effective, and accessible EV charging infrastructure that will be sufficient to meet increased deployment of EVs.