

Testimony to the Senate Committee on Transportation

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Electric Vehicle Incentives and VW Settlement Fund Proposals

I. Overview

Good afternoon. I have been asked to testify today about electric vehicle incentives and VW settlement funding proposals.

I have appeared before this committee previously this year on these and related subjects:

- On February 8, I testified about the transportation nexus to Vermont's climate and energy strategies. This included some testimony about the State's goals for highway corridor fast charging and additional testimony about Vermont's VW EVSE Grant Program.
- On February 26, with the assistance of Gary Holloway from ACCD, I provided additional testimony about the VW EVSE Grant Program.
- On February 27, with the assistance of Dan Potter from PSD, I testified about the EV incentive program in the Transportation Bill.

Heidi Hales and Megan O'Toole from DEC, and Ross McDonald from VTrans, testified to this Committee on February 28 about EV settlement funds, including the transit- and school-bus electrification program.

In my pre-filed testimony for today, I have updated my prior testimony to reflect changes that were made to the EV purchase and lease incentive program in the Transportation Bill (H.529) before the bill was voted out of the House Transportation Committee.

In addition, I have provided some updated information about Vermont's VW EVSE Grant Program, including provisional plans to fund a highway corridor fast charging backbone in Vermont.

II. EV Incentives

A. Overview of the EV Incentive Sections of the Transportation Bill

The EV purchase and lease incentive program now appears in sections 25 through 28 of the Transportation Bill:

- Section 25 establishes definitions of “Electric vehicle” and “Plug-in hybrid electric vehicle.”
- Section 26 contains legislative findings supporting an EV incentive purchase and lease program for new and used EVs for low- and moderate-income Vermonters.
- Section 27 lays out the elements of the incentive program.
- Section 28 requires the PSD, with the help of VTrans and the JFO, to submit a report at the end of this year on establishing highway user fees for EVs and extending the EV incentive program to achieve the EV targets in the CEP.

I will address these sections in order.

B. Definitions of “Electric vehicle” and “Plug-in hybrid electric vehicle” (Section 25)

It is appropriate for the incentive program to focus on pure battery electric vehicles and plug-in hybrid electric vehicles. Hybrid vehicles that do not plug in are established, conventional technology that do not require incentives because they are already competitive with pure internal combustion engine vehicles. In addition, while improving vehicle fuel efficiency remains important, meeting Vermont’s climate and energy goals requires bringing plug-in electric vehicles up to scale as rapidly as possible.

The definitions in section 25 may be more complicated than necessary and could create confusion by creating inconsistencies with existing terminology. The 2018-2021 ZEV Task Force Multi-State ZEV Action Plan includes some simple, practical definitions:

Zero Emission Vehicle (ZEV) includes:

Battery Electric Vehicles (BEVs) powered solely by an electric battery

Fuel Cell Electric Vehicles (FCEVs) electric drive fueled by hydrogen

Plug-In Hybrid Electric Vehicles (PHEVs) powered by a combination of an electric motor and a gasoline engine

The term Plug-In Electric Vehicle (PEV) is a subset of ZEVs and includes both PHEVs and BEVs.

ZEV Action Plan ([file:///C:/Users/ddutcher/Downloads/2018-zev-action-plan%20\(1\).pdf](file:///C:/Users/ddutcher/Downloads/2018-zev-action-plan%20(1).pdf)) at 1. In addition to introducing new terms that may not be necessary, the definitions in the bill limit EVs to pleasure cars, which may needlessly exclude pickup trucks and SUVs. It might work better for the bill to adopt the ZEV Action Plan definitions and then place any restrictions in the part of the bill that addresses program elements.

Although it is unlikely that anyone could use the EV incentive program to purchase a hydrogen fuel cell vehicle, the program is aimed at scaling up battery electric vehicles and plug-in hybrid electric vehicles, and the program elements could therefore be modified to exclude hydrogen fuel cell electric vehicles from coverage.

C. Legislative Findings (section 26)

The findings on page 22 line 12 state that “Vermont has approximately 2,600 EVs on the road today.” According to Drive electric Vermont’s website, Vermont has almost 3,000 EVs on the road as of January 2019 (<https://www.driveelectricvt.com/buying-guide/why-go-electric>).

The findings go on to say (on lines 12 and 13) that “EVs in Vermont are just 3.5 percent of new passenger vehicle registrations.” DEV’s website indicates that EVs are now approaching 6 percent of new passenger car registrations.

D. Program Elements (Section 27)

The bill as written gives the responsibility for establishing and administering the program to the PSD, with ANR and VTrans providing cooperation and support. However, the PSD’s capacities are limited, and VTrans is willing to serve as lead agency. VTrans will need to contract with a consultant for the program’s day-to-day

administration. Section 27(e) of the bill (page 25, lines 1 through 3) sets aside \$75,000 of the budget for this program for marketing, program development, and administration.

The bill originally included a MSRP cap of \$35,000. The cap has been raised to \$40,000 to avoid excluding popular EV models like the Chevy Bolt.

E. Study of Extending of the EV Incentive Program and Applying Highway User Fees to EVs

Section 28 of the T-Bill asks the PSD, VTrans, and the JFO to report on how to extend the incentive program as may be necessary to meet the vehicle electrification goals of the CEP. The bill states (page 25, line 16) that the CEP calls for 4,600 EVs by 2025. The actual target is 10 percent renewable energy in transportation, which translates to about 50,000 EVs by 2025.

Section 28 also requires the report to examine the steps necessary to implement highway user fees for EVs. Pursuant to last year's transportation bill, the PUC is currently considering this issue and gathering input from a variety of stakeholders, including Vermont's distribution utilities, state agencies, charging companies, and environmental groups. The PUC must report to the Legislature by July. The bill requires the agencies to report to Legislature by December.

III. VW Settlement Fund Proposals

Vermont's share under Appendix D of the national VW settlement is \$18.7M. Under the terms of the settlement, Vermont is entitled to dedicate up to 15% of that amount, or \$2.8M, to passenger vehicle charging equipment. Vermont has decided to use the full 15% for this purpose and has established a VW EVSE Grant Program.

ANR has delegated responsibility for administering the VW EVSE Grant Program to ACCD, with the support of an interagency team that includes VTrans, ANR, PSD, and DOH. ACCD had prior experience administering EVSE grants as part of its downtown development programs.

ACCD has recently awarded funds in the first grant round of the VW EVSE Grant Program. Funding for the first round was capped at \$400,000, and applicants requested over \$1.6M. Funding went to nine different towns and organizations across the State. The funding supported one DCFC, and the rest went to L2 charging. The grant materials included a link to VTrans' 2017 highway corridor fast

charging report

(https://vtrans.vermont.gov/sites/aot/files/planning/documents/DC%20Highway%20Corridor%20Report_112217_Final_FULLVERSION-web.pdf), which shows seven sites, which if developed with DCFC, would bring fast charging within thirty miles of nearly every address in Vermont. A fast charging network is an essential part of alleviating consumer anxiety about entering the EV market. However, no applications were received for any of these fast charging sites.

After administrative costs, \$2M of funding remains for additional passenger vehicle EVSE grants. ACCD plans to announce a second grant round, which will also be capped at \$400,000, this spring and plans to announce second-round grant awards this summer.

The agencies are considering a carve-out for DCFC in a third and probably final grant round. A grant round of this nature may be structured as a request for proposals and may or may not require applicants to bid on a suite of charging sites. A grant round for highway corridor DCFC will have the benefit of the PUC's report, due this July, on advancing vehicle electrification in Vermont.

Possibly \$1M+ may be needed to build out a basic fast charging network in the State. Because of low traffic volumes, fast chargers may not be profitable for some time, even without demand charges. Therefore, incentives are important to help establish a basic fast charging backbone in Vermont.

Under Appendix C of the nationwide VW settlement, VW's subsidiary, Electrify America, must invest about \$2B on L2 and DCFC and education and outreach across the United States. Electrify America is not required to invest any of that money in Vermont. Electrify America plans to fulfill its investment obligations through four cycles over a ten-year period. In its first investment cycle, Electrify America did not locate any charging stations in Vermont, probably due to Vermont's relatively low traffic volumes.

Electrify America's cycle 2 investment plan (<https://elam-cms-assets.s3.amazonaws.com/inline-files/Cycle%202%20National%20ZEV%20Investment%20Plan%20-%20Public%20Version%20vF.pdf>), released earlier this month, identifies I-89 from Concord to Burlington to the Vermont-Canada border as a cycle 2 regional route that will receive two fast charging stations. It is not clear where those stations will be located. Electrify America, which is aiming to profit from its investments over the long run, could also invest in Vermont in future investment cycles. Vermont agencies have not yet determined whether Electrify America's plans should affect

decisions about where to invest Appendix D settlement funds in highway corridor fast charging.

Even when Electrify America concludes its ten-year investment program, it will have met less than 10% of the nation's charging needs. The U.S. Department of Energy's Alternative Fuels Data Center EVI- Pro lite projection tool (<https://afdc.energy.gov/evi-pro-lite>) estimates how much EV charging is needed at state and city levels based on projected consumer demand. For 50,000 EVs, which is Vermont's 2025 goal, EVI-Pro Lite projects that 190 DCFC stations will be necessary. Vermont currently has fewer than 30, and these are not strategically distributed.

The remaining amount of Vermont's Appendix D funding (after the 15% set aside for the VW EVSE Grant Program) will go to replacing heavier duty vehicles, including transit and school buses, with electric technology, along with the associated charging infrastructure to go with those vehicles. ANR is in the process of retaining a program administrator to develop a pilot project for electric transit and school buses in Vermont.

IV. Questions/Discussion