



Plug In America
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April 8, 2019

Judith Whitney, Clerk
Vermont Public Utility Commission
112 State Street
Montpelier, VT 05602

Re: Case No. 18-2660-INV Investigation into promoting the ownership and use of electric vehicles in the State of Vermont

Dear Ms. Whitney,

Plug In America appreciates the opportunity to contribute to Vermont's investigation of the issues surrounding the ownership and use of electric vehicles (EVs). Please accept for filing the Comments of Plug In America in response to the questions of the Commission of March 22, 2019.

The Role of State Government

1. What role can state government play in providing incentives to encourage the purchase or lease of EVs, new or used? Please provide specific examples of state-government-sponsored EV-incentive programs in other states of which you are aware, including how those programs are funded. Are you aware of the type of state incentive, the level of state incentive, or any state approaches (such as marketing and sales information) that have proven to motivate a substantial shift to buying EVs, in Vermont or elsewhere?

States have offered a variety of means to incentive the purchase or lease of EVs. Some of these include: **Rebates** are an effective tool for increasing EV adoption. Rebates typically are provided to the EV purchaser after a processing period of a few weeks. Rebates may be funded through the Regional Greenhouse Gas Initiative fund, as in Massachusetts, or other carbon auction funds, as in California. In either case, they may be supplemented with appropriations from other State resources. Other sources of funding are also possible.

Point-of-sale rebates are "cash on the hood" and are immediately provided to the buyer. Connecticut has such a program.

A **sales tax exemption** can also encourage EV adoption. New Jersey has such a program. A sales tax exemption results in more expensive vehicles effectively receiving a larger incentive.

An **income tax credit** is possible in states with income taxes, but results in the longest delay between the purchase and receiving the incentive.

Rebates may be limited to certain classes of EVs (such as only BEVs and not PHEVs), or to certain price levels (such as vehicles under \$50,000 or under \$60,000), or to certain income levels of buyers. Or, a greater incentive may be available for low- or moderate-income EV buyers.

Many incentives, including rebates, are discussed in the *Achieve Policy Toolkit 2.0*, developed by Plug In America and the Sierra Club in 2018. This can be accessed at <https://pluginamerica.org/wp->



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[content/uploads/2018/06/AchiEVe-Policy-Toolkit-2.0_2018.pdf](#). Some of the information in that report has since changed, so an updated list is provided below.

- California provides a rebate of up to \$1,500 on PHEVs or \$2,500 on BEVs, as long as their income is below a threshold of \$150,000 for single filers or \$300,000 for married filing jointly.
- Colorado provides a tax credit of \$5,000 for EVs, with a phase-out through 2021.
- Connecticut provides a rebate of up to \$1,000 on PHEVs or up to \$2,000 on BEVs with MSRP below \$50,000.
- Delaware provides a rebate of up to \$3,500 for EVs with MSRP below \$60,000.
- Massachusetts provides a rebate of up to \$1,500 on BEVs with MSRP below \$50,000.
- New Jersey provides a sales tax exemption for EVs, which is normally 6.625%.
- New York provides a rebate of up to \$2,000 on EVs with MSRP below \$60,000.
- Oregon provides a rebate of up to \$2,500 for EVs with MSRP below \$50,000.
- Pennsylvania provides a rebate of up to \$2,000 for EVs with MSRP below \$50,000.

California and Oregon have supplemental rebates for low-income purchasers. Some states have reduced rebates for vehicles above the MSRP cap.

Generally, higher rebates are associated with more dramatic shifts in EV adoption.

Other state policy options include HOV lane access (where applicable), state fleet EV mandates, waived or reduced registration fees, EV-ready building codes, consumer outreach and education, and protection of EV-designated parking spots from occupancy by non-charging vehicles. In addition, states can allow prudent and reasonable investments by utilities in EV charging infrastructure, allow the use of VW settlement funds for additional infrastructure, and allow charging infrastructure for state fleets to be available to the public when not needed by those fleets.

2. What source of funding should the State of Vermont use to provide incentives for the purchase or lease of EVs?

RGGI funds provide a potential source of revenue for EV incentives. The utilities' Tier 3 programs provide another source. Should the Transportation and Climate Initiative (TCI) lead to the development of a program to cap carbon emissions from mobile sources, that program could provide another source of revenue.

3. What educational programs should the State of Vermont engage in to convey the benefits of transportation electrification to Vermonters, including environmental benefits, lower maintenance and fuel costs, and lower costs for ratepayers generally?

One of the easiest ways to show support for EVs is through a proclamation or resolution that emphasizes the benefits of EVs. These proclamations or resolutions can be adopted at the local, city, or state level. These actions are a strong force to continue building momentum to transition to EVs and show which public officials will take a stand and sign on to the proclamation or resolution.

Ride and drive events, such as those in National Drive Electric Week and Drive Electric Earth Day, provide an excellent means of communicating the benefits of EVs to the public.



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The State of Vermont can also leverage the expertise of groups such as Plug In America or the Vermont Energy Investment Corporation on EV educational programs. We also believe that utilities have a role to play as partners in this process.

4. What can state government do to ensure that the benefits of transportation electrification are not limited to citizens with higher levels of income?

A significant amount of the benefits of transportation electrification accrue to the public at large. These include reduced carbon emissions and reduced emissions of nitrogen oxides, volatile organic compounds, and particulate matter (including ultrafine particulate matter). These benefits will be even greater in Vermont due to its very low-emission electricity system. And the downward pressure on rates from off-peak EV charging will benefit all ratepayers. It is therefore the case that *even if* only those with higher levels of income were driving EVs (which is not the case), they would *not* be the only ones benefiting. Reduced emissions benefit everybody who lives in the climate and breathes air.

Nevertheless, state government can take numerous actions to ensure that an *even greater* fraction of the benefits reaches those of low and moderate income (LMI). This might entail increasing EV rebates for LMI buyers; creating a rebate for used EVs; extending a battery warranty to the buyers of used EVs (as in the Zero-Emission Assurance Project established by California Assembly Bill 193 of 2018); developing an EV car-sharing program; or, electrifying transit buses.

5. What other suggestions or ideas do you have for the role of state government?

We support the efforts of the State of Vermont to examine these issues in a systematic way. We encourage state government to be patient. Technology transitions take time, and market participants benefit from certainty about future rebate levels. Acknowledging that the State will likely want any EV rebates to have a sunset date, we suggest setting that date as far in the future as feasible and developing a *gradual* ramp-down of the incentive rather than an abrupt termination. That will incentivize customers to buy an EV sooner rather than later – and actual adoption is what drives the “learning curve” that in turn brings down costs and renders the incentive less necessary.

We note that, as long as the various externalities of petroleum products are not included in their prices, then those fuels benefit from an *implicit subsidy*. Therefore, even when EVs reach cost parity, an incentive may still be appropriate in recognition of their reduced externalities compared to petroleum-powered vehicles.

6. What other incentives can the State provide — for example, providing EVSE in state employee parking lots?

The State can leverage its role as an employer to accelerate EV adoption. Workplace charging alleviates range anxiety and leads to greatly increased adoption as EV drivers interact with their coworkers and describe how the vehicles meet their needs.

Even Level 1 or low-amperage Level 2 charging would be sufficient to replenish a typical commute over the course of a workday. With higher-powered systems, it becomes important to move fully charged vehicles during the workday. Truly high-powered charging, such as DC fast charging, might be utilized for State fleets that include larger vehicles or vehicles with unpredictable duty cycles.



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7. Should the State do more to switch its vehicle fleet to electric and prioritize the use of the most efficient vehicles in its current fleet?

Electrification of public fleets is an effective way to put the importance of prioritizing clean transportation into the public spotlight. EVs save taxpayers money and are good for public health. Some states have created policies that require a fixed percentage or growing share of state-government fleet vehicles be electric, hybrid, and/or “alternative fuel vehicles” (AFVs). The ideal vehicle-fleet mandate programs require all battery electric vehicles (BEVs) or at least plug-in vehicles.

We would note that emissions per vehicle-mile traveled (VMT) may be a better metric than “efficiency.” Although EVs are generally more efficient than internal combustion engines, what makes them truly transformative is that they can be run on low- or no-carbon electricity, especially in Vermont. Therefore, employing a metric of emissions per VMT would better illustrate this advantage.

Plug In America encourages Vermont to transition state fleets to EVs as rapidly as possible, taking into consideration the necessary duty cycles and vehicle capabilities. We expect the vehicle offerings in the EV space to continue rapidly expanding in the next few years.

The Role of Public Interest Organizations

1. What role can public interest organizations play in educational programs in Vermont to convey the benefits of transportation electrification to Vermonters, including environmental benefits, lower maintenance and fuel costs, and lower costs for ratepayers generally?

Groups such as Plug In America have extensive experience with educational programs. Our PlugStar program combines dealer training and certification with a customer-facing tool to connect interested buyers with trained and motivated sales experts who have in stock the vehicle they are looking for. Additionally, we have coordinated National Drive Electric Week with other public interest organization partners for nine years. Finally, we have developed a new EV Support Program to assist new EV drivers with any questions they may have.

Other groups such as the Vermont Energy Investment Corporation have extensive contacts and established relationships in the State of Vermont.

Public interest organizations have an important role to play in educating consumers about this relatively new and unfamiliar technology.

2. Please provide examples of programs from other states that are designed to ensure that the benefits of transportation electrification are not limited to citizens with higher levels of income.

We again emphasize that the very significant emission reductions of EVs benefit all residents of the state (and in fact the planet), while the downward pressure on rates benefits all ratepayers. Still, we acknowledge the importance of considering options to deliver even greater benefits to citizens with low-to-moderate incomes. Most of these solutions to our knowledge are projects of state governments, although in some cases public interest organizations assist with coordination or administration.

In Massachusetts and Rhode Island, the Green Energy Consumers Alliance’s “Drive Green” program has secured bulk purchase discounts on certain EVs to allow buyers to access these vehicles at a discount.



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The EV car-sharing program in Los Angeles, BlueLA, includes low- and moderate-income districts of the city and provides a means for citizens who cannot afford to own an EV to still be able to drive one. However, this is not operated by a public interest organization but by a corporate partner. Similarly, Chattanooga's EV car-sharing program is supported by the regional transit authority but operated by a corporate partner. The EV car-sharing program in Indianapolis is also operated by a corporate partner.

3. What other suggestions or ideas do you have for the role of public interest organizations?

Plug In America believes that public interest organizations have an important role to play in outreach and education. As one such organization, representing the EV drivers, we hope to remain involved with deliberations on policy and investment.

Thank you for the opportunity to provide these comments. Please do not hesitate to contact me with any questions.

Best regards,

A handwritten signature in black ink that reads "Pete O'Connor".

Pete O'Connor
Policy Specialist
Plug In America