S.271 Testimony
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3/22/18

I am the transportation efficiency director at the Vermont Energy Investment Corporation. Before starting, I'd like to clarify that I work for and am here representing VEIC, not Efficiency Vermont. Efficiency Vermont is one of several programs under the VEIC umbrella. I am part of the Consulting Division for VEIC, focused on reducing the environmental and economic impact of energy use in the transportation sector. We do this by advancing the market for electric vehicles – both cars through the Drive Electric Vermont program and work in other states - and heavy duty vehicles such as electric school buses and transit buses.

I appreciate the opportunity to comment on S.271 and thank Sen. Bray and other sponsors of the bill for proposing much needed policies to advance the market for electric vehicles in Vermont.

There are a number of reasons why it is important to accelerate the market for electric vehicles in Vermont.

- Vermonters collectively spent over \$1 billion on transportation energy in 2015. Driving on
 electricity could cut this cost by 65%, to about \$350 million, with more of the electricity dollars
 staying local to Vermont.
- Auto ownership is high in Vermont and it's challenging to provide options such as public
 transportation in rural areas. The majority of Vermonters will continue to use personal vehicles
 to meet their mobility and access needs for the foreseeable future. Electric vehicles are one way
 to reduce household transportation costs.
- Driving in electric mode provides the equivalent of paying about \$1.50/gallon of gas. An average Vermont driver could have saved \$2,860 between 2012 and 2017 driving an EV. EVs also have lower maintenance and repair costs. According to AAA, all-electric cars cost \$.065 per mile for maintenance and repairs, a 17% savings compared to the average vehicle.
- Transportation is the largest contributor to Vermont's GHG emissions of all sectors (42%), with personal vehicle use making up the largest share of those emissions (65%).
- Meeting Vermont's 2016 Comprehensive Energy Plan (CEP) goal of 10% renewably powered transportation would require about 45,000 EVs in Vermont by 2025—a major increase from the current 2,000.

Despite these benefits, existing market forces will not increase the market share of EVs fast enough to meet Vermont's climate and energy targets for the transportation sector.

Three principal barriers to accelerated adoption are: 1) the upfront costs of EVs; 2) lack of sufficient charging station infrastructure; 3) lack of general awareness about electric vehicles and their benefits. For Vermonters who are challenged with high transportation costs, S.271 is an important start to address these barriers.

Comments on Bill Provisions:

Exclude first \$30,000 for all-electric and first \$15,000 for plug-in hybrid from purchase and use tax.

- Providing an incentive for the purchase of an electric vehicle is one of the most significant steps
 we can take to help get more Vermonters into an electric vehicle. Research not only in Vermont
 but nationally shows that the upfront cost of the vehicle is a major barrier to purchasing an EV.
 That's why our neighbors in Massachusetts, New York and Quebec have adopted EV incentives.
- In addition, it is great that you have structured the incentive to target those who need it most: low and moderate income Vermonters.
- For low income Vermonters, I recommend you go further by applying an incentive to used electric vehicles. As more vehicles come off lease, purchasing a used EV will become more of an option and for low income Vermonters, this could be the most viable way of getting into an EV.

The availability of charging infrastructure is another barrier to EV adoption. In this bill you have included three important provisions that will help to make it easier to operate charging stations, provide beneficial rates for EV charging, and for Vermonters to find a place to park and charge.

First, the bill clarifies that owning or operating a charging station does not cause a person to be considered to be a utility, allowing for the sale of electricity for charging station owners. Removing this barrier will encourage more market actors, such as gas stations, employers, and charging companies to install charging stations and recover the costs for this investment. Currently, there are work arounds, such as paying for electricity by the hour instead of the Kwh. This isn't good for charging station owners or for consumers, who need transparency on how costs are being assigned. The miscellaneous transportation bill – passed by the House and currently being considered by the Senate – also includes this provision, and I recommend that you provide your comments in favor of this provisions to Senate Transportation.

Another important provision in the bill will allow for reduced rates for electric vehicle charging and authorize & direct the Public Utilities Commission to conduct an investigation into reduced rates for on-premise charging of EVs by electric customers.

As I mentioned earlier, there are many benefits that electric vehicles provide to Vermonters. There are also potential benefits to the grid if EV owners are incentivized through rate design to charge off-peak. Time of use rates, should not only benefit the grid, but also reduce fuel costs for EV owners, further incentivizing EV adoption. A PUC investigation that engages all stakeholders in exploring the range of benefits of EV adoption for utilities and their customers is an important first step in laying the groundwork for EV rate design that benefits all Vermonters. Again, the miscellaneous transportation bill in Senate Transportation bill calls for a PUC investigation. I encourage you to support this and recommend it include a review of incentives that could accelerate EV adoption.

We do not support the provision in the bill that imposes a supplemental registration fee for electric vehicles.

Imposing an additional registration fee runs counter to state policy to encourage EV adoption, and is, in fact, a disincentive. We support recommendations in the 2016 VTrans report on EV fees, which state that "if a comprehensive transportation revenue solution is not in place that addresses losses from increased vehicle efficiency, a fee should go into effect when the number of EVs represent 15% of auto sales." This is the point in which we will have moved from early adoption to mainstream market adoption and a disincentive, such as the registration fee, will have less of an impact on the market. A better way to make up lost revenue to the Transportation Fund could be a per Kwh fee on charging. This

fee, in combination with rate design, could still reduce fuel costs for EV owners, while contributing revenue to the Transportation Fund for EV use of the roads.