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January 9, 2019

Ms. Judith C. Whitney, Clerk
Vermont Public Utility Commission
112 State Street, Drawer 20
Montpelier, VT 05620

Re: Case 18 – 2660 – Investigation into promoting the ownership and use of Electric Vehicles

Dear Ms. Whitney;

At the request of the Vermont Public Utility Commission (“Commission”), the City of Burlington Electric Department (“BED”) and Vermont Public Power Supply Authority (“VPPSA”) submit the following information response relative to Transportation funding. This response addresses a series of questions raised by the Commission in its Order dated December 20, 2018.

The Commission’s December 20th Order included 17 multi-part questions. These questions raise a variety of complex issues that may affect how Vermont pays for its transportation infrastructure in the future. As distribution utilities (“DU’s), we are generally hesitant about providing the Commission with advice on state tax matters and defer to the experts at the Agency of Transportation (“VTRANS) and other state agencies. There are however three areas where additional commentary may be helpful. They relate to: potential implications of a transportation fee being assessed on a kWh basis, cost of managing third party data and who serves as the State’s transportation tax collector.

kWh fee structure

As an initial matter, BED and VPPSA recommend the Commission take the time to clearly and unequivocally address the jurisdictional question that has already been raised in this proceeding prior to submitting any tax related recommendation to the legislature. In our view, clarity with respect to how the Commission intends to resolve



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the jurisdictional issues in this proceeding would help inform broader discussions relative to potential transportation funding options. As previously noted, BED and VPPSA contend that the Commission needs to determine whether it is in the public interest to exert the full force of its authority over all electric vehicle supply equipment (“EVSE”) station owners, pursuant to 30 V.S.A. §203, or if the Commission should moderate its authority without undermining its conferred powers.¹ If the Commission determines that “light” regulation over EVSE station owners is more appropriate, then such regulations must also apply to utility owned EVSE as well. A consistently applied regulatory framework across all EVSE owners would further promote the deployment of publicly available EVSE throughout Vermont.

BED and VPPSA understand that the State is evaluating the merits of assessing a kWh electric “fuels” tax on electric vehicle (“EVs”) and plug-in hybrid electric vehicle (“PHEV”) owners. To BED and VPPSA, any such evaluation would be highly dependent on the Commission’s above-noted determination relative to the scope of its jurisdiction. More pointedly, such a tax regime might not be the ideal method for generating additional transportation revenues since the upfront cost of implementing such a tax system may outweigh the incremental revenues from the relatively few EVs and PHEVs on the road at this time. Thus, BED and VPPSA recommend that the Commission ask the Legislature to postpone any decision relative to electric fuel tax legislation until after the conclusion of this proceeding.

BED and VPPSA are concerned that if the State’s taxing authority were to determine today that a kWh “fuel” tax regime is an appropriate method for generating additional transportation revenues, then the Commission might, by default, have to apply a lighter form of regulation over EVSE owners prior to making its jurisdictional decision, as the Commission would have to allow for the re-sale of electricity to EV/PHEV owners on a kWh basis. As the Commission knows, such resale is only allowed under Section 249a on a nonprofit basis (campground sub-metering).

¹ See BED/VPPSA filing of November 5, 2018.



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Third Party data

In the event the State does decide to impose a kWh tax on EV and PHEV owners, the State should not assume that distribution utilities would be able to immediately collect and remit such taxes in the near future – especially if the State also decides that Vermont’s distribution utilities would have to collect such taxes from third party EVSE owners. As noted in comments filed previously in this proceeding, the integration of third party data streams with existing utility data collection and software systems is by no means simple or inexpensive. It might not even be possible, as these are complex systems that are integrated with existing customer information and billing systems. Distribution utilities would need to dedicate staff (or hire new staff) to maintain these systems or, in the event that integration is not feasible, handle these processes manually. Such an investment could necessitate a considerable capital investment and personnel time. These costs would need to be recovered from the EVSE station owners or from the general body of ratepayers. Given the current market share of EVs and PHEV’s (approx. 2,000 vehicles), this type of investment is, in all likelihood, not warranted at this time. Charging EV owners (via EVSE stations) directly, which would be consistent with past regulatory precedent, may be cost prohibitive and thus act as a barrier to widespread EV and EVSE deployment. On the other hand, recovering costs from the general body of ratepayers could generate unwanted and unnecessary customer resentment as non EV owners would likely oppose such a subsidy. BED and VPPSA recognize that the State may be seeking to impose a new kWh tax on EV/PHEV owners that would be collected by the distribution utilities as a means to remove an apparent cross-subsidy between EV/PHEV owners and other vehicle owners. But, imposing such a new kWh tax regime would only replace the existing cross-subsidy in the liquid fuels market with another cross-subsidy in electric rates between EV/PHEV owners and all other electric customers.

Some additional operational challenges for distribution utilities, especially for EVSE located behind the utility meter (meaning, the EVSE is not directly connected to a utility grade meter) include:



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1. Level one charging equipment is not capable of measuring kWh consumption (it is in effect a simple outlet). Also, BED and VPPSA are unaware of any cost-effective sub-metering options for level one equipment. And, since level one chargers typically use a standard 110v outlet, distribution utilities would be unable to effectively and accurately disaggregate EV usage for billing and taxing purposes (i.e. to differentiate EV charging from other uses) without additional hardware. Thus, a significant portion of EV/PHEV charging could avoid paying a kWh tax by simply plugging their EV/PHEV into a traditional electric outlet, if it were imposed in the future.
2. Although residential and commercial grade level 2 charging metrology may have the capability of measuring kWh consumption, it is not entirely clear how accurate they are or whether they are tamper-proof. Several parties to this proceeding have claimed that the embedded metrology of level 2 EVSE (or larger) is as accurate as the revenue-grade meters installed by utilities but we have not actually been able to independently verify such claims. The Commission should verify these claims prior to making any recommendation to the legislature that may rely on this data.

Also, it is BED's understanding that most EVSE are designed to transmit kWh usage via an API port embedded in the charging apparatus. The API port is connected via a wireless internet connection (or WIFI) back to the entity responsible for managing and collecting the EV owner's kWh usage. Presumably, any kWh transportation tax would be based on the data being transmitted via the API port. However, it is not certain how secure this data path might be for the purposes of assessing and collecting transportation taxes.

3. If the State determines that distribution utilities should be responsible for collecting and remitting all EV/PHEV taxes from EVSE station owners, then the Commission and the State would also need to recognize that assuming such a role is not cost free. Distribution utilities would need to develop the necessary back office systems to accept, store and manage the data from nonutility EVSE owners in order to determine the total electric-transportation tax owed. Distribution utilities would also need to modify their customer information and



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billing systems to track payments and create additional billing determinants (as noted above). Passing these costs onto EV and PHEV owners would amount to a disincentive for choosing to go fossil-free (or nearly so in the case of PHEVs). But, recovering these costs from all ratepayers would create another cross-subsidy, as noted, that is not unlike the current one in the liquid fuels market.

4. If the State determines that distribution utilities should be responsible for collecting and remitting all EVSE taxes, distribution utilities may also incur additional bad debt expenses and need to shut off customers for non-payment of their EV related taxes. Such cost would be recoverable from all customers, including non-EV/PHEV owners.

Tax Collection

Irrespective of the current market share of EVs and PHEVs (roughly 0.4 percent), if the State determines that Vermont should nevertheless impose a kWh tax on EV and PHEV drivers, then the individual EVSE station owners, including residential, multifamily, condominium associations, businesses and other non-utility owners, should be the entities responsible for collecting and remitting such taxes. Collecting and remitting transportation taxes should not be the responsibility of Vermont's distribution utilities unless they are the EVSE owners. As noted above, distribution utilities are not currently set up to effectively serve as the State's transportation tax collector nor should they incur the costs to become the tax collector in the future, unless the Commission also determines that the associated costs are recoverable in rates or some other fee structure. It is also worthy to note that distribution utilities may find themselves in the position of having to shut off access to electricity for nonpayment of the transportation tax if it were included on the utility bill. Such an event could have other adverse effects for customers as well as additional inconveniences such as increased payment penalties.

Recommendations & Conclusion

In summary, BED and VPPSA recommend the following:



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- The Commission should issue a ruling relative to the scope of its jurisdiction over EVSE station owners prior to submitting its report to the legislature;
- Should the Commission determine that light regulation over EVSE station owners is in the public interest, such a determination should also apply to utility owned EVSE;
- Should the Commission decide to recommend to the legislature that a fuels tax on EV and PHEV owners is an appropriate tax policy, such a tax should not be assessed on a kWh basis until the market share of EVs and PHEV reaches 15 percent, as previously recommended by VTRANS.² As noted above, imposing a kWh tax would require additional investments by all market participants and such investments might not be fully recoverable from EV and PHEV owners at this time. Also, the cost of collecting such taxes may exceed the revenues at this time since so few EV's and PHEV's are on the road.
- Similarly, if the State and/or Commission were to determine that an EV/PHEV kWh fuels tax is an appropriate tax policy, the Commission should recommend to the legislature that each EVSE station owner would be responsible for collecting and remitting EV/PHEV fuels taxes.
- If the State and/or Commission determines that an EV/PHEV kWh fuels tax is an appropriate tax policy, the Commission may want to suggest that such a tax be based on the kWh size of the onboard battery. Such a tax regime could easily be administered by the Department of Motor Vehicles when the owners register their vehicles. (Admittedly, this type of tax would not capture out-of-state EV use of Vermont's transportation infrastructure).

As of Fall 2018, approximately 2,000 EVs and PHEV have been registered in the State. Consequently, imposing a new EV/PHEV tax would raise an inconsequential

² See Legislative report of the Agency of Transportation, *Section 15 2018 Plug in and electric vehicle registration fees*, Dec. 2016.



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amount of funds today relative to the overall transportation budget. BED and VPPSA would also note that EV/PHEV owners have been contributing to the State's transportation fund through purchase & use taxes, registration fees and vehicle inspections. Plus, PHEV owners contribute through a fuels tax, as these vehicles consume fossil fuel in addition to electric battery power. In fact, VTRANS' 2016 Legislative Report on Plug-In Hybrid and Electric Vehicle Registration Fees concluded that, in the short-term, the higher purchase and use paid by EV owners (due to the higher purchase price of EVs) largely offsets any reduction in gas tax revenue attributable to EVs. Given the nascent EV/PHEV market, it may still be appropriate to extend the "fuels" tax hiatus for EVs and PHEV owners for another 3 to 5 years, or until the market share of these vehicles reaches 15 percent of total vehicle registrations in Vermont. As noted in earlier VTRANS reports, EVs are still in the "early adopter" phase. Therefore, imposing a new tax on EVs and PHEV would impose another barrier to early EV/PHEV adoption and use. Such a tax would reduce the effectiveness of the incentives that the Vermont utilities have implemented under Tier 3 of the Renewable Energy Standard. Lastly, a tax barrier would undermine the State's efforts to achieve its 90 percent renewability goals by 2050, as well as work against its efforts to curb the emission of greenhouse gas emissions.

BED and VPPSA appreciate the opportunity to provide this feedback to the Commission in the above referenced proceeding. Should you have any additional questions or concerns, please feel free to contact us directly.

Sincerely,

Thomas Lyle
Programs and Policy
Burlington Electric Department

Melissa Bailey
Legislative & Regulatory Affairs
Vermont Public Power Supply Authority