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## **Filed in ePUC**

December 14, 2018

Judith Whitney, Clerk  
Vermont Public Utility Commission  
112 State Street  
Montpelier, Vermont 05620-2701

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

Dear Ms. Whitney:

At the close of the December 7, 2018 workshop (“Workshop”), the Public Utility Commission (“Commission”) requested that stakeholders provide recommendations on statutory language regarding jurisdiction the Commission could consider for submission to the Legislature, as well as responses to requests for information that were made during the Workshop. By this filing, Green Mountain Power (“GMP”) submits its comments and responses to information requests.

### Comments:

Cost-effectively and innovatively advancing the use of electric vehicles (“EVs”) in order to reduce Vermont’s primary carbon emitting end-use is critically important to our customers and our climate. As detailed in our recently filed 2018 Integrated Resource Plan, we offer a variety of programs to promote EV adoption, including EV charger incentives; EV charger as a service; an eCharger Pilot with flat fee unlimited charging utilizing shared access and load control; workplace EV charger contribution matches; installed public and workplace EV charging; and upstream rebates from manufacturers. When our eCharger Pilot comes to an end at the beginning of 2019, we are planning to transition to an EV Tariff that will allow customers who prefer it to pay a flat fee rate for EV charging with 100% renewable energy shared access load control. We believe that home charging will continue to represent the major portion of charging activity for EV owners. Given the later peak hours we are now experiencing, we believe it is critically important to create the ability to manage the EV loads for customers during curtailments as charging sessions increase. We also are looking for ways to enable greater electrification through altering demand charges or time-of-use rates to encourage greater deployment of EV infrastructure.

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What we've learned so far is that customers who have chosen EVs like our programs and participate in load control when offered – our opt out rate on the eCharger pilot has been only 2% during curtailment events. However, EV adoption is stifled by the high cost of EVs compared to conventional vehicles, and the lack of EV choices that match Vermonters' needs (like EV pick-up trucks, SUVs or EVs with all-wheel drive and clearance compatible with our rugged terrain). While incentives offered through Tier III have been helpful to those customers who have decided to purchase an EV, the level of incentive has not been sufficient to encourage a greater number of Vermonters to adopt EVs available in the current market.

During the Workshop, the Commission indicated that its 2019 report will robustly consider all solutions to promote adoption of EVs including recommendations outside the regulated space. One such recommendation could be Vermont-specific incentives similar to the federal tax credits available for purchasers of EVs in order to help more Vermonters afford these vehicles.

During this phase of the docket, the Commission heard from stakeholders promoting the build-out of infrastructure for publicly accessible Level 3 charging for long distance EV travel by distribution utilities ("DUs"), paid for by Vermont's electric customers. Two primary suggested models for utility involvement in Fast Charger infrastructure included utility ownership of charging infrastructure and utility contribution of "make-ready"<sup>1</sup> costs to support chargers.

While this infrastructure likely will be required at some point, we do not yet know whether other market solutions – through the automobile industry, the growing EV charger industry, or otherwise – will emerge to provide it. Exact demand and optimal locations for public Level 3 charging also are not yet known. Our experience so far tells us that most charging will continue to be done at home or work. Additionally, we have seen standards change over the past few years, raising the possibility of stranded investments.

Given these uncertainties, we do not recommend at this time that Vermont adopt a policy of requiring electric customers to pay for statewide public charging infrastructure through a DU build out.

Finally, the Commission advised that it hopes to file a recommendation with the Legislature by the end of December on the appropriate scope of jurisdiction over EV charging, including whether any statutory changes are needed. As stated in previous filings, GMP believes that the sale of electricity through EV charging stations is within the scope of PUC and Department of Public Service ("Department") jurisdiction, and it also believes DUs should continue to have a role in providing and encouraging EV charging infrastructure, including for load control which benefits all customers. To the extent that the Commission recommends non-DU providers be exempted from this jurisdiction, Title 30's jurisdictional provisions should be amended and a clear assignment of consumer protection should be made to an appropriate state agency. The following statutory change to 30 V.S.A. § 203 (1) and (2) would exempt non-DU providers from Commission and Department jurisdiction.

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<sup>1</sup> While "make ready" is a term more commonly used in the pole attachment context, we understand that third party chargers are using that term to cover line extension and other costs that might be needed to install EV chargers in certain locations.

The Public Utility Commission and the Department of Public Service shall have jurisdiction over the following described companies within the State. . .

- (1) A company engaged in the manufacture, transmission, distribution, or sale of gas or electricity directly to the public or to be used ultimately by the public for lighting, heating, or power and so far as relates to their use or occupancy of the public highways. **Notwithstanding the foregoing, a person or company that purchases electricity from a company so engaged in the distribution or sale of electricity directly to the public, and who furnishes electricity exclusively to charge EVs and PHEVs for compensation, is not subject to the jurisdiction of the Public Utility Commission and the Department of Public Service.**
- (2) That part of the business of a company which consists of the manufacture, transmission, distribution, or sale of gas or electricity directly to the public or to be used ultimately by the public for lighting, heating, or power and so far as relates to their use or occupancy of the public highways. **Notwithstanding the foregoing, a person or company that purchases electricity from a company so engaged in the distribution or sale of electricity directly to the public, and who furnishes electricity exclusively to charge EVs and PHEVs for compensation, is not subject to the jurisdiction of the Public Utility Commission and the Department of Public Service.**

Information Requests:

During the Workshop, the Commission asked the DUs to provide information regarding the cost of meters and how DUs charge customers for meters. In general, GMP does not directly assign a charge for meters.<sup>2</sup> Metering is a component of our cost of service that is collected through rates. The appropriate meter is installed to measure the anticipated load accurately and to meet the requirements of the applicable rate class. The cost of a meter installed also will vary depending on the purpose of the meter (e.g., the cost of a residential meter is less than a transformer-rated meter). The chart below depicts the average cost of a meter installed in a customer-owned meter socket and the amount and type of EV chargers that would be expected to be supported by the service level, but does not include other costs such as line extension costs as they are highly variable.

Service	KW	Max # of chargers *	GMP's installed cost of metering**
Single phase	Up to 48 kW	3 L2 chargers	\$163
Three phase	Up to 144 kW	2 L3 chargers or 10 L2 chargers	\$383
Single phase	48 kw to 167 kW	2 L3 chargers or 11 L2 chargers	\$1152
Three phase	Above 144 kW	Depends on number of kW	\$1707

\*Assumes fast charger-62.5kw each, Level 2 charger with 2 ports -14 kW each.

\*\*This cost is not direct charged but a part of the applicable rate.

<sup>2</sup> An exception is for an additional meter for separately-metered gross generation under net metering 2.0.

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The Commission also asked if only one meter could serve a bank of chargers or whether a separate meter would be required for each individual charger. One meter could serve a customer's bank of chargers at one service location. If several customers had chargers within a bank, each customer account would require a separate meter for that customer's chargers. Of course, GMP is willing to work with third party chargers to develop opportunities to utilize the meter built into the charger to avoid the need for a utility meter, but issues such as integration into our billing and other systems would need to be addressed.

During the Workshop, GMP also received an information request from Renewable Energy Vermont ("REV") asking GMP to provide a list of its EV charging programs. GMP's historic and current programs include the following: 2015 GMP eVgo Innovative Pilot; 2017 eCharger Innovative Pilot; and the 2018 Tier III workplace charging incentive. GMP's 2018 Integrated Resource Plan, in particular Chapter 2, provides additional information on GMP's programs to encourage EVs. This is available on GMP's website and through ePUC.

Thank you for this opportunity to comment, and if you have any questions or concerns, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Carolyn B. Anderson".

Carolyn Browne Anderson

CBA

Enclosure

cc: ePUC Service List