

December 12, 2022

Holly R. Anderson, Clerk  
Vermont Public Utility Commission  
112 State Street  
Montpelier, VT 05620-2701

Re: Case No. 22-4869-INV: Public Utility Commission 2022 Investigation into Rates Related to Electric Vehicles.

Dear Ms. Anderson,

Vermont Electric Cooperative (VEC) offers the following comments on the topics outlined in the Commission's November 15, 2022 order opening an investigation and requesting comments in response to the electric vehicle rate design provisions in Section 33 of Act 55 of the 2021 legislative session. The purpose of Section 33 was to "...encourage efficient integration of PEVs and EVSE into the electric system and the timely adoption of PEVs and public charging through managed loads or time-differentiated price signals."

VEC continues to offer and evaluate charging options that encourage efficient use of the grid and reduce costs for vehicle owners as well as the cooperative. VEC currently offers members two options - a whole house time of use rate and a managed charging home program for home level II chargers.

1. **Rate details.** *Details on the specific rate or rates offered, including eligibility by customer class or group. Utilities may either provide a descriptive narrative or the titles or numbers of any tariffs or pilot programs previously filed with the Commission. Please also identify the default residential and commercial retail rates and tariffs for point of reference.*

Residential TOU- VEC offers Service Classification 1.2, a Pilot Time of Use (TOU) optional rate available only to members who submitted an incentive through the Energy Transformation Program. A year ago, VEC surveyed members with electric vehicles and found that 93 percent of the respondents charge primarily at home, and that 62 percent of those respondents use level II chargers while 38 percent trickle charge. The TOU rate helps incentivize load management for all EV drivers, regardless of whether they use a level I or II charger.

The TOU rate has three time periods—on peak (5:01pm-9pm), mid peak (7:01am-5pm) and off peak (9:01pm to 7am weekdays, and all-day weekends and holidays). The rate for the off-peak period is \$.12426 compared to the standard residential rate of \$.18556. These whole house rates provide an incentive for customers to shift their electric usage away from high-cost hours and do not require submetering.

Non-Residential Energy Transformation rate- VEC also offers Service Classification 2.2 for Small Commercial members and 2.3 for Large Commercial members that participate in Energy Transformation projects. These are time of use, non-demand rates, whereas the default rate for users with more than 15,000 kWh/month does charge based on demand.

Flexible Load Incentives for Level II Charging- VEC offers an opt-in load management program for members that utilize level II electric vehicle chargers or home batteries. VEC offers a \$250 bill credit for any level II charger. To receive the incentive, members must either enroll in our load management program or set a schedule to avoid charging from 5 - 9 pm Mon-Fri. If the member enrolls in the load management platform, they receive an additional \$50 upfront incentive and \$8/month for every month that they do not opt out of events. For chargers enrolled in the load management platform, VEC can request that the charger not operate during peak events (5-6 events per month, up to 3-4 hours each event).

In 2023, VEC will begin offering free chargers that are compatible with the load management platform provided that the member enrolls the charger in the platform. The member will be responsible for the installation of the charger. VEC expects that this will increase the amount of managed charging on the platform and allow us to respond to increasingly dynamic load patterns.

Our incentive levels and programs are designed not only to drive behavior and reward participation but also to benefit the rest of the membership through cost savings to the co-op.

Pilot Level I charger control program- VEC is working with Burlington Electric Department and Washington Electric Cooperative to explore the possibility of a load management pilot program to target the 38 percent of VEC's electric vehicle drivers who trickle charge at home. The primary reasons given by these members for not using level II chargers were 1) that plugging into a regular outlet is sufficient (57 percent), and 2) that installing a level II is too expensive (41 percent). Through smart plugs, VEC may be able to offer a load management option for all members who own EVs. These members may also be interested in installing a level II charger through the free managed charging program referenced above.

- Enrollment.** *The number of customers enrolled in such rates and the percentage of customers who utilize utility incentives related to EVs (Tier III, for example) who are also enrolled in the rate or rates.*

Residential TOU

- 225 residential members have obtained EV purchase incentives from VEC; 12 of these members (5.3 percent) have opted in to the “whole home” TOU rate.

- 156 residential members have obtained PHEV purchase incentives from VEC; 6 of these members (3.8 percent) have opted in to the “whole home” TOU rate.

#### Non-Residential Energy Transformation rate

None of our commercial accounts currently participate in the Pilot TOU rates due to EV incentives. However, this rate is available for public chargers.

#### Flexible Load Incentives for Level II Charging

All of the VEC members that have taken advantage of the home charger incentive participate in some form of load management. There are about 40 electric vehicle chargers enrolled in VEC’s Flexible Load Home Charger program, which allows VEC to manage load during potential peak periods. Approximately 60 other charger incentives have been given to members who have not enrolled in the Flexible Load Program, in some cases because their charger is not compatible. These members have set a charging schedule that avoids 5 – 9 pm weekdays.

### 3. **Effectiveness.** *Whether the rates appear to be directing load away from peak times related to cost. What are the “lessons learned” during implementation so far?*

For chargers enrolled in VEC’s Flexible Load Home Charger Program, VEC can disable EV charging during peak events. Member can opt out of individual events if they need to charge, but they rarely do. This program has confirmed the flexibility of EV charging, demonstrating that drivers can and will shift load away from peak times if given the proper price signals and an automated method.

The EV and communications platform markets are developing rapidly, and there is not a one-size-fits-all solution. It is important to remain nimble and flexible to minimize the risk of stranded assets. For example, VEC has previously offered programs using specific devices only to have the device manufacturer or third-party communications platform sold and the program discontinued. The best solutions we have found enable us to communicate directly with the devices themselves rather than relying on the installation of additional hardware.

For the TOU rate, we have learned that members who expect to save money based on existing usage patterns will choose the rate, and those who do not will not elect TOU. We have not performed extensive analysis on the extent to which members on TOU shift usage away from peak time periods. However, participants are paying a higher rate for time periods that cost VEC more to serve.

4. **Progress.** Please describe (1) progress toward developing new or additional EV or EVSE rates, (2) any barriers the utility is facing as it attempts to implement the requirement, (3) pathways to overcoming any such barriers associated with the development of rates for EV and EVSE rates in Act 55, and (4) concrete steps the utility is taking to prepare to propose rates in advance of the June 30, 2024 deadline for implementation.

VEC has found the load management platform to be an effective way to shift charging away from peak times and incentivize members who participate. After the initial enrollment, members do not have to do anything for the program to achieve the intended benefits. They do not have to set a schedule or manually curtail usage themselves. It also does not require any additional metering. By offering a level II flexible load program, a whole home TOU rate, and potentially a level I flexible load program, we are able to offer our members choices and appropriate compensation for shifting load away from peak time periods.

5. **Addressing barriers.** In last year's report, utilities identified several barriers to implementing EV and EVSE rates including metering, changing technology, cost, and broadband access. Please describe the specific actions the utility is taking to overcome these barriers.

VEC has worked to create a level II home charging program that is simple to administer and easy for participants to understand and participate in, and that provides appropriate compensation. The flexible load home charging program enables VEC to curtail usage during peaks events for all participating chargers. After the initial enrollment, the participant does not need to do anything to receive their monthly credit and help VEC reduce load at peak times. Providing free chargers starting in 2023 will enable greater participation among EV drivers and address the cost barrier that many drivers identified in our 2021 survey.

Thank for the opportunity to comment. We look forward to ongoing engagement on this topic.

Sincerely,



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