VPPSA
Vermont Public Power Supply Authority

Putting the Public in Power.
www.vppsa.com

P.O. Box 126 • 5195 Waterbury-Stowe Rd. • Waterbury Center, VT 05677 • 802.244.7678 • Fax: 802.244.6889

December 12, 2022

Via ePUC

Ms. Holly Anderson, Clerk
Vermont Public Utility Commission
112 State Street, 4th Floor
Montpelier, VT 05620-2071

RE: Inventory Request in Case No. 22-4869-INV - 2022 Investigation into Rates Related to Electric Vehicles

On November 15, 2022, the Public Utility Commission ("Commission") issued an Order opening an investigation and requesting information to support its January 2023 report to the legislature regarding progress of Vermont's distribution utilities on implementing rates for plug-in electric vehicles ("EVs") and electric vehicle supply equipment ("EVSE"). Vermont Public Power Supply Authority ("VPPSA"), on behalf of its members[1], provides the following response.

1. ***Rate details***. *Details on the specific rate or rates offered, including eligibility by customer class or group. Utilities may provide either 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.*

   To build upon VPPSA's filing in Case 21-5271-INV[2], the Village of Swanton Electric Department offered an electric vehicle pilot rate at its utility-owned, public EV Charging Station per its 2016 Tariff Filing #8615. This pilot rate was available for two-years and results were reported to the Commission on November 30, 2018. As of the date of this filing, these charging stations are still in use under the tariff rates

[1] VPPSA Member Utilities include Barton Village, Inc.; Village of Enosburg Falls Inc.; Town of Hardwick Electric Department; Village of Jacksonville; Village of Johnson, Inc.; Village of Ludlow Electric Light Department; Village of Lyndonville Electric Department; Village of Morrisville Water & Light Department; Town of Northfield Electric Department; Incorporated Village of Orleans; and Swanton Village, Inc.
[2] See VPPSA's response filed January 3, 2022 in Case 21-5271-INV Public Utility Commission 2021 Investigation into Rates related to Electric Vehicle.

established under Tariff #8615, with usage and the customer service charge sponsored by the local Chamber of Commerce and local businesses.

Although no other specific EV/EVSE rates are currently in place for VPPSA members, progress continues to build upon prior research and support the State's clean energy and electrification goals for the transportation sector. That progress is addressed under the *Progress* question below.

2. ***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.*

   Usage data from the Swanton EV Charging Station shows no significant demand, though the utility is committed to maintaining the stations to ensure access and availability of charging infrastructure in their community.

3. ***Effectiveness***. *Do the rates appear to be directing load away from peak times related to cost? Are there other value streams or opportunities presented by EV rates? For example, will EV rates be effective in avoiding upgrades to the distribution grid or reducing other power supply costs? What are the "lessons learned" during implementation so far?*

   As noted above, other than Swanton, VPPSA members do not currently have EV rates in place, however data and analysis gathered as part of the two pilot programs referenced in the next section are intended to inform cost-effectiveness, load management, and potential distribution system upgrades.

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.*

   (1) *Progress Developing New EV or EVSE Rates:* VPPSA has engaged in two separate and collaborative pilot programs including rate design, innovative projects, and data analytics to inform rates related to EVs and EVSE:

   <u>Electric Vehicle Charging Rate Pilot Project</u>

   Under the Department of Public Services' Grant #: 02240-FY22-SEP-02, The Electric Vehicle Charging Rate Pilot Project aims to research and acquire meaningful data that supports the design and implementation of innovative

tariffs (or rates) for electric vehicles. The project is structured under three (3) distinct Phases of work and research. The Pilot's goal is to develop and implementing a pilot residential tariff for EVs with three member utilities, designed for applicability across all eleven member utilities, to ultimately be revised and filed before the Commission.

Currently in Phase 1, VPPSA continues its research and analysis to develop a menu of potential rate alternatives for both DCFC and residential EVSE pilot rates. These potential rate alternatives are intended to facilitate informed decisions with pilot participating utilities as it relates to implementing EVSE pilot rates. Key components of this research and analysis continues to include EV adoption rates, customer load management incentives and understanding customer behavior, billing system capabilities, and anticipated load factors and key peak load hours.

PowerShift Pilot Program

VPPSA and Efficiency Vermont (EVT) have worked together throughout 2022 to design and offer the PowerShift Pilot Program to qualifying residential customers across all member utilities' service territory. The pilot's goal is to install up to 40 Open Charge Point Protocol (OCPP) Level 2 chargers in 11 VPPSA member utilities' service territories to help inform EV charging load profiles and customer behavior as it relates to peak load avoidance. Data collection and analysis will occur throughout 2023.

Although the Pilot faced a number of administrative delays related to contract negotiations and project implementation design, VPPSA and EVT continue to collaborate in the enrollment of qualified residential customers. As of December 12, 2022 VPPSA has issued 49 Tier III rebate incentives for the purchase or lease of an all-electric or plug-in hybrid electric vehicle and three (3) public EV Charging Station incentives in two (2) member utility communities.

The PowerShift Pilot Program was officially announced on November 3, 2022[3] and VPPSA has connected with 25 residential customers to explore participation in the pilot, with 3 participants currently enrolled.

(2) *Barriers to Implementation:* While the State of Vermont and VPPSA members continue to encourage electric vehicle adoption through policy and incentive-based measures, adoption within members' rural service territories remains

[3] See PowerShift Pilot Program press release dated November 3, 2022.

gradual. With limited charging infrastructure and cost-barriers to purchasing an EV, more rural and historically lower-income areas of the state face significant socio-economic barriers to implementation. Despite state or federal-implemented funding opportunities, VPPSA member utility service territories are often out of scope or not prioritized for initial investments[4] (e.g., highly prescribed funding requirements and EV corridor classifications). VPPSA and its member utilities remain committed to collaborating with regulators, external groups, and businesses to address charging infrastructure, economic viability, and rate structures associated with EV adoption.

As noted in VPPSA's response in Case 21-5271-INV, another significant barrier to implementing EV rates continues to be costs associated with technology integrations and effective metering to encourage EV adoption while meeting least-cost integrating planning, ensuring adequate cost of service recovery, and preventing adverse impacts to ratepayers not utilizing a PEV rate[5]. Adequate load profiles and analysis are required to ensure appropriate rate structure design and maintain distribution grid reliability. At a basic level, access to reliable broadband and cellular service coverage are required to support wi-fi enabled EV and EVSE-related charging technologies including programmable or consumer-based load management solutions.

(3) *Pathways to Overcoming Barriers*: VPPSA is in the final stages to launch implementation of its multi-year project to install advanced metering infrastructure (AMI) in its member service territories. The AMI infrastructure will enable visibility into time-based usage data and support data analytics to comply with appropriate cost-studies in EV and EVSE rate requirements. Ultimately, VPPSA continues to explore combinations of rate and incentive-based structures to send appropriate price signaling to residential, commercial, and industrial customers to electrify the transportation sector.

(4) *Preparation to Propose Rates for June 30, 2024 Deadline*: As discussed in the responses above, VPPSA and its member utilities are continuing to make progress in the research, analysis, and technology investments required to comply measuring usage and developing appropriate EV/EVSE rate structures.

5. ***Addressing barriers***. *In last year's report, utilities identified several barriers to implementing EV and EVSE rates including metering, changing technology, cost, and*

[4] See State of Vermont National Electric Vehicle Infrastructure Plan, approved by Federal Highway Administration on September 27, 2022.
[5] See Act 55, Sec. 33. PEV ELECTRIC DISTRIBUTION UTILITY RATE DESIGN

broadband access. Please describe the specific actions the utility is taking to overcome these barriers.

As noted at length in response to the questions posed above, VPPSA has engaged and collaborated with several internal and external partners to address and overcome the various barriers to implementation. VPPSA advocated on behalf of public power utilities to seek state-appropriations that support AMI infrastructure and looks forward to implementing this key technology to advance its members' capabilities in more sophisticated rate structures and design.

Member utilities continue to collaborate with Vermont's Communications Union Districts to perform make-ready work and encourage broadband access for all.

Through VPPSA's centralized services, member utilities can access economies of scale that establish affordable solutions to address changing technologies and related costs, where appropriate.

Thank you for the opportunity to respond on behalf of VPPSA's members and provide an update on continued progress related to EV/EVSE rates. If you have any questions or seek additional information, please don't hesitate to contact me.

Respectfully,

Sarah E. Braese
Manager of Government & Member Relations
Vermont Public Power Supply Authority
(802) 882-8509