

March 11, 2022

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

Re: 21-3883-RULE Proposed Creation of PUC Rule Concerning Energy Storage

Dear Ms. Anderson:

The Public Utility Commission (Commission) issued a procedural order on February 16, 2021 requesting reply comments and supplemental information following the January 13 and 20, 2022 workshops held under this case.

Vermont Electric Cooperative (VEC) appreciates the opportunity to continue the conversation regarding the appropriate level of regulatory oversight when permitting storage facilities. To that end, VEC has developed responses to several of the specific questions posed by the Commission in its procedural order requesting reply comments and supplemental information as well as several issues raised during the January 13 and 20, 2022 workshops.

Sincerely,

Dan Potter

Dan Potter



**Questions Posed within the Commission’s Procedural Order Requesting Reply Comments
and Supplemental Information**

Topic 1. Simplified Siting

a. Decommissioning Plans

What information should the Commission require for decommissioning plans? Should decommissioning plan requirements vary by project size, footprint of the site and/or other factors? What special considerations should the Commission make for decommissioning of storage systems in particular? Should the Commission include decommissioning requirements in the new storage rule or amend existing Rule 5.900 to expressly apply to storage facilities?

VEC recommends that the Commission amend Rule 5.900 to expressly apply to storage facilities.

b. Simplified Siting for Storage other than Batteries

30 V.S.A. § 248(u) requires the Commission to “establish a simplified application process for energy storage facilities subject to this section with a capacity of up to 1 MW, unless it establishes a larger threshold by rule.” 30 V.S.A. § 201(4) defines an energy storage facility as “a stationary device or system that captures energy produced at one time, stores that energy for a period of time, and delivers or may deliver that energy as electricity to the grid for use at a future time.”

Given the definition of energy storage facility in 30 V.S.A. § 201(4) and the requirement for a simplified application process in 30 V.S.A. § 248(u), can the Commission limit the type of storage eligible for simplified siting, by rule or otherwise, to battery storage? If not, how can the Commission best address the simplified siting of technologies other than battery storage?

The definition above appears to be a very broad interpretation of what constitutes an energy storage facility and when taken at face value would likely include facilities like pumped

hydro. VEC is supportive of establishing a simplified process for battery storage facilities, and VEC believes that the Commission could establish a simplified application process that meets the language of the statute above by conditionally waiving certain 248 criteria. This would give the Commission and other stakeholders the ability to reinstate certain 248 criteria if a particular project or project type, such as a pumped hydro project, warranted review under that criteria.

c. Natural Resource Assessments

The Department of Public Service (“Department”) has proposed that natural resources criteria could be conditionally waived for energy storage facilities sited within existing structures. The Agency of Natural Resources (“ANR”) has suggested that a full natural resources report should be submitted with every Certificate of Public Good (“CPG”) petition. Are there any circumstances under which ANR would support the conditional waiver of some natural resources criteria?

VEC supports the Department’s proposal to conditionally waive natural resource criteria for energy storage facilities sited within existing structures.

d. Fire safety

If the Commission were to adopt the Department’s proposal that most criteria under 30 V.S.A. § 248 be waived for systems sited within existing buildings, would there be a regulatory incentive to develop projects within existing structures? If so, does this pose any broader concerns for public safety due to fire risk and how can the Commission best address those concerns?

Waiving most criteria under 30 V.S.A. § 248 for systems sited within existing buildings could possibly create a regulatory incentive to develop projects within existing structures. To address this potential concern the Commission could incorporate NFPA 855 into the rule.

e. Small Systems (under 100 kW)

Should the Commission require systems under 100 kW to register with the Commission under a general permit? In the alternative, should small systems simply be required to meet basic

requirements (interconnection, fire safety, and decommissioning for example) without registering with the Commission?

It is critical for VEC to gain visibility on all of the storage assets that exist and plan to be operated in parallel with the system for planning, resiliency, and to ensure system stability. Some regulatory mechanism should be required that includes notification to the distribution utilities of any sized storage system installed in their service territory. VEC is agnostic as to the specific regulatory process needed to achieve this goal, whether it takes the form of a registration process as contemplated above or embedded as an interconnection agreement/notification.

Topic 2. Aggregations and interplay between owners, operators, and utilities

f. Ownership and Cumulative Impacts

To assess the cumulative impact of energy storage systems being added to existing generation, several commenters suggested that the Commission should use an amendment process for the existing CPG at the site. When a proposed energy storage facility installer is not the CPG holder of the generation component of the paired system, should the storage project receive a separate CPG? If so, how should the Commission consider cumulative impacts?

VEC believes that cumulative impacts should be considered when reviewing a project, but does not have a position on whether that should be an amendment of an existing CPG or a separate CPG.

g. Proposed Codes and Standards

Of the standards identified by the Department in their comments of December 16, 2021, (pp. 6-7), which should the Commission adopt? Should the codes and standards that the Commission adopts vary based on size, complexity, use-case, or other factors?

VEC recommends that the Commission adopt all of the standards identified by the Department in their December 16, 2021 comments. Additionally, VEC does not recommend that

the Commission vary the requirements by size, complexity, use-case, or other factors unless those differentiations exist within the code itself.

h. 30 V.S.A. § 231 CPG

In its comments of December 16, 2021, the Department suggests that the Commission should consider the following issues (among others) in a review of aggregated resources for a § 231 CPG (emphasis added):

- *Provisions to ensure the load impacts of storage are appropriately reviewed by the interconnecting utility and do not negatively impact ratepayers;*
- *Provisions to ensure participation of the resource in the aggregation and the aggregation in the wholesale markets does no harm to the distribution utility or ratepayers.*

Does FERC Order 2222 limit the Commission's jurisdiction in considering the impact of aggregated resources on ratepayers? Does the Commission have the authority to deny an aggregation CPG based on the impact that the aggregation may have on ratepayers?

VEC has not engaged FERC counsel to review these questions. However, if the Commission determines that it has the authority to consider impacts to ratepayers when reviewing a § 231 CPG, VEC would support the inclusion of the above issues proposed by the Department.

i. Aggregation Amendments

If an already existing aggregation seeks to amend its aggregation, what opportunity does the utility have to assess system stability, system reliability, and transmission effects of the proposed amendment? How can Commission processes and rules ensure that utilities can review amendments and change existing interconnection agreements (if necessary)?

Currently, DUs do not have an opportunity to assess system stability, system reliability, and transmission effects of amendments to existing aggregations. The rules adopted by the Commission should include some regulatory process to facilitate this review.

This could be accomplished by requiring aggregators to periodically send a form to the DUs showing changes in size or updates, e.g. new inverters.

Issues raised during the January 13, 2022 Workshop

Are participants ok with the PUC providing flexibility within the rule to allow different requirements by order rather than rule?

Yes, VEC is supportive of the Commission providing flexibility within the rule to allow for implementation of changing requirements over time by order rather than by rule.

Which portions of 30 V.S.A. §248 b(5) could be conditionally waived?

In its initial comments filed on 12/16/2021, VEC stated: “All projects above 1MW should be subject to the full Section 248 permitting process; however, for projects above 150 kW and up to 1 MW nameplate capacity, some criteria could be waived. Some smaller scale storage projects could be located entirely within an existing structure or disturbed footprint on a building site. These type of projects could have b(1), portions of b(5), and b(8) conditionally waived. However, for projects above 150 kW and up to 1 MW nameplate capacity that are sited on a greenfield these criteria should not be conditionally waived.” During the workshop on January 13, Commission staff asked VEC which portions of 30 V.S.A. §248 b(5) could be conditionally waived. VEC believes that for storage projects with a power rating between 150kW and 1MW that are located within an existing structure or within the disturbed footprint on an existing building site, all of the b(5) criteria with the exception of public health and safety could be conditionally waived.

Issues raised during the January 20, 2022 Workshop

Can VEC's billing system accommodate DC coupled system calculations?

No, it cannot. To properly account for the energy produced by solar arrays with DC-coupled batteries, the member would have to install an additional meter on the battery in addition to the normal solar meter for a net metering system. VEC would then have to work with our billing vendor to program in the calculations required to arrive at the correct figure for solar generation. Given these complications, the limited number of VEC members who have installed DC-coupled batteries (fewer than 10), and the cost to both VEC and the individual participants,

VEC has offered the affected members an annual true-up of their solar generation to ensure that their credits are properly allocated.

Would grid energy concern apply to Standard Offer projects as well?

Yes. If, for example, a battery were to be co-located with an existing Standard Offer project, it is critical to ensure that the output of the battery, if it is to be compensated at Standard Offer rates, is from the output of the standard offer project.

Have the DUs provided any information related to storage to ISO-NE?

Each month VEC sends a file to ISO NE that shows all of our pending and online net metering systems. This file also includes a column that indicates whether a net metering system is paired with a battery as well as the power (kW) and energy (kWh) ratings of the battery.

How is VEC communicating with devices enrolled in its Flexible Load – Home Battery Program?

Under VEC's Flexible Load – Home Battery Program, VEC communicates with the batteries through a third-party software service and the member's WiFi.

How does VEC protect its member's reliability for devices enrolled in its Flexible Load – Home Battery Program?

Under VEC's Flexible Load – Home Battery Program, VEC has made significant efforts to protect our member's primary use case for their battery – reliability. To start, VEC has committed to cancelling called peak shaving events if adverse weather is predicted that would cause widespread outages. Secondly, VEC will always leave 20% energy within the battery. Finally, VEC provides participating members the option of opting out of any peak event.