VIA First Class Mail or ePUC
April 1, 2025

Re: Petition of Vermont Transco LLC and Vermont Electric Power Company, Inc. for a Certificate of Public Good, pursuant to 30 V.S.A. § 248, for approval to install an Advanced Power Flow Controller at the VELCO Sand Bar Station in Milton, Vermont

45-Day Advance Notice Package

Dear Neighbors and Government Entities Entitled to Advance Notice of Project,

This letter is to provide you with advance notice that Vermont Transco LLC and Vermont Electric Power Company, Inc. (together, VELCO) are preparing to file a petition with the Vermont Public Utility Commission (Commission), pursuant to 30 V.S.A. § 248, for approval to install an Advanced Power Flow Controller at the VELCO Sand Bar Station located at 586 Bear Trap Road in Milton, Vermont (the Project).

VELCO anticipates filing the petition with the Commission around May 15, 2025, and we are providing the following Project overview and related information in this 45-day advance notice package in accordance with Commission Rule 5.402 and 30 V.S.A. § 248 (Section 248). This letter is organized to provide you with the following information: (1) an overall description of the Project, (2) an explanation of the need for the Project, including an assessment of alternatives considered, (3) an initial overview of the impact of the Project, and (4) information on the Commission review process, including participation by municipal and regional planning commissions, as well as links to guidance on the Commission's review process.

1. **Project Description:**

The Project involves the installation of an Advanced Power Flow Controller (APFC), which is needed to maintain reliability of power in the region by extending the life of the Sand Bar Station Phase Shifting Transformer. The Project will install 12 APFC modules adjacent to the existing Sand Bar Station in Milton. The APFC installation requires a yard expansion of the eastern fence line of the existing station to accommodate the APFC devices (SmartValves), bus work, instrument transformers, and connection of the APFC into the existing Sand Bar Station. The existing eastern fence line of the station will be moved approximately 187 feet to the east to accommodate the APFC, and this new fenced-in area will encompass approximately 41,240 square feet (a little less than one acre). There will be three new motor-operated load break switches installed within the existing Sand Bar Station. The Project will require VELCO to relocate two sections of the existing K19 115kV transmission line for the expansion of the station and to provide access for construction and maintenance. Tree clearing and grading are

required as shown in Attachment A to facilitate the station's yard expansion, transmission line relocation, and the creation of natural resource habitat. The Project also includes constructing an access drive along the northern end of the existing fence line to create an access route for construction.

A preliminary site plan of the proposed Project is provided with this letter as Attachment A. Although the engineering for the Project is not yet complete, Attachment A depicts a preliminary design layout for the Sand Bar Station as modified to include the APFC.

2. **Project Need:**

The Project is needed to extend the life of the Sand Bar Station Phase Shifting Transformer (PST), which controls the flow across the Sand Bar PV20 line preventing overloads on the line. In 2021, the Sand Bar PST experienced an internal failure resulting in the removal of the PST from service. Without the PST in service, the line remained open for approximately 5 months until another PST could be relocated from another substation. Long duration outages of this line place the power system into a contingency configuration that could manifest into large reliability challenges should a second contingency occur.

The analysis of the Sand Bar PST 2021 failure identified excessive tap changes as the likely cause of the failure. The power flow on the line is increasingly more variable requiring the PST to perform more tap changes, reducing the life expectancy of the PST. The variability of the flow on the line is expected to continue to increase as the power grid integrates more renewable sources of generation. The APFC will regulate/moderate this variability to reduce the number of tap changes the PST is required to perform, thereby extending the life of the PST.

In connection with planning this Project, VELCO considered several alternatives to extend the existing PST's life. One alternative was to install a second PST in series with the existing PST. This would reduce the number of tap changes by half and would provide full redundancy allowing the line to be kept in service with only one of the PSTs out of service. Additionally, the control range with both PSTs in service would have doubled. However, this alternative was not selected as it does not provide the greatest life extension of the existing PST, does not have fast and precise control of the flow, is portable but difficult to transport due to its weight and size, requires the longest implementation time before life extension of the PST begins, and is not the least cost option.

A second alternative considered was the installation of a full replacement APFC in series with the existing PST. This alternative would reduce the number of tap changes to nearly zero, provide full redundancy allowing the line to be kept in service with the PST out of service, and would double the control range with both the full APFC and PST in service. Additionally, the APFC provides more precise control, technology diversity, and modular design. It has a two-year lead time. However, this option was not selected, as it was the most expensive of the three alternatives compared with the benefits that it would provide.

The third alternative considered was the installation of a half replacement APFC in series with the PST. This alternative would reduce the number of tap changes to nearly zero, provide half redundancy allowing the line to be kept in service with one PST out of service, and the control range with the half APFC and PST in service would increase by 50%. Additionally, the APFC provides more precise control, technology diversity, modular design, and a significantly shorter lead time than an alternative one. This alternative was selected for this Project because it is the most cost-efficient alternative, which provides the necessary operational requirements and can be implemented in the near term to extend the life of the PST.

3. **Project Impact:**

VELCO has engaged VHB Inc. to inventory and assess natural resource features in the Project area, and will consult with the Vermont Agency of Natural Resources to address options for properly avoiding or mitigating any potential impacts.

In terms of visual impact, VELCO's aesthetic consultant, T. J. Boyle Associates, LLC (TJB), a landscape architecture and planning firm, has reviewed the preliminary design plans and performed a visual analysis for the area surrounding the Project. TJB's preliminary analysis indicates that the Project will not result in an undue adverse impact on aesthetics and scenic and natural beauty of the area. The Sand Bar Station is an existing component of VELCO's transmission system, and mature vegetation—some of which was previously installed landscape mitigation plantings—significantly screen most visibility of the facility. The APFC will expand the fenced yard of the existing station to the east and north, away from surrounding roads, including US Route 2 and Bear Trap Road. A proposed access road will be constructed beginning at the location of an existing residential drive, immediately adjacent to the entrance of VELCO's existing access road. It is not anticipated that clearing for the project will increase visibility of the existing Sand Bar Station, or create visibility of Project upgrades. As a result, TJB does not recommend any landscape mitigation for this Project. TJB will conduct a full analysis of potential aesthetic impacts to further evaluate the need for landscape mitigation measures—that full analysis will be provided with VELCO's petition filed with the Commission and will further examine local and regional planning documents for criteria that address scenic resources and open space.

VELCO's sound consultant has assessed the potential noise impacts associated with the Project. A complete engineering noise analysis will be provided as part of the Project's filing with the Commission. VELCO does not anticipate that noise mitigation will be required for the Project.

The Project poses no long-term traffic impacts in Milton, Vermont. VELCO anticipates only minor, short-duration traffic impacts, if any, due to deliveries of equipment and material to the station during the construction period. Such deliveries will use existing roads, including US Route 2, with vehicles that are commonly used on public roads. The Sand Bar Station's long driveway, parking area, and station yard will be used to accept deliveries of equipment and

material to the station site. During delivery of any large equipment, VELCO will employ the services of traffic control personnel to manage traffic flow.

4. **Information Regarding the Project Review Process:**

As noted above, VELCO has enclosed a preliminary site plan with this letter, showing the location and proposed design of the Project. The information contained in this package is intended to provide a general understanding of the Project and could change based on further analysis and the requirements of applicable permits.

Before beginning work on the Project, VELCO must obtain a Certificate of Public Good (CPG) from the Commission under 30 V.S.A. Section 248. Before issuing a CPG, the Commission must find, among other things, that the Project will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality.

Section 248(f) of Title 30 provides information regarding participation of municipal and regional planning commissions in Section 248 proceedings. Per 30 V.S.A. § 248(f)(1)(A), each municipal and regional planning commission may convene a public hearing on the proposed petition. Pursuant to section 248(f)(1)(C), each planning commission may submit recommendations to the petitioner within 40 days of the petitioner's submittal to the planning commissions, which is May 12, 2025, for this Project. The petitioner's application to the Commission must address any written comments provided to the petitioner in response to the 45-day advance submission that are related to the Section 248(b) criteria and any oral comments related to those criteria made at any public hearing conducted pursuant to 30 V.S.A. § 248(f)(1)(A). Section 248(f)(1)(D) provides that each planning commission may make recommendations to the Commission after the petition is filed with the Commission.

For additional information regarding the Commission's review process, please reference the Commission's document labeled, "Public Participation and Intervention in Proceedings Before the Public Utility Commission," which can be found on the Commission's website at: https://puc.vermont.gov/document/public-participation-and-intervention-proceedings-public-utility-commission. Specific information about Section 248 cases can be found on the Commission website at: https://puc.vermont.gov/document/section-248-procedures.

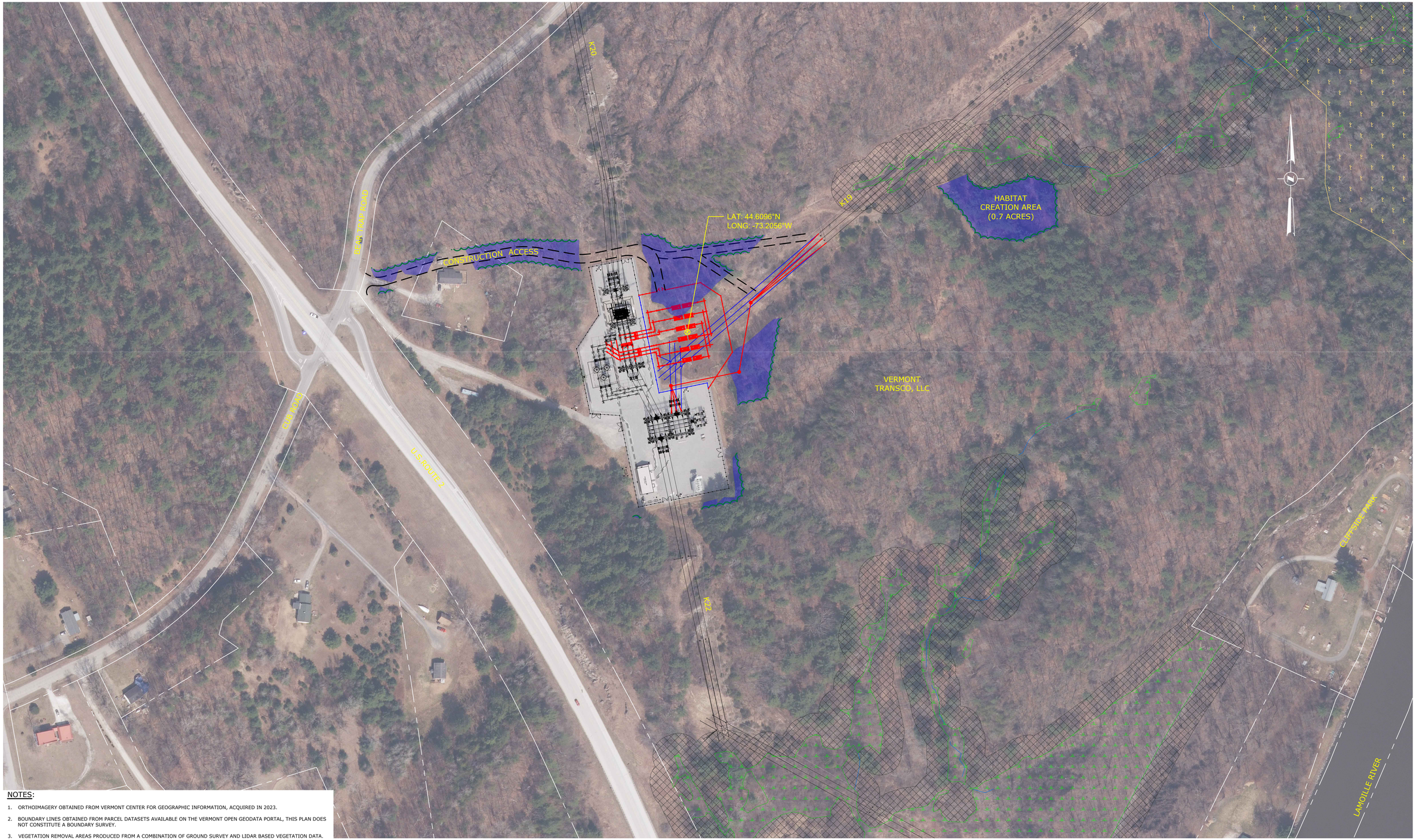
If you have any questions about the Project or have any feedback, please reach out and I will be happy to speak with you. My email address is jfiske@velco.com . If you would like to contact me by phone, my number is (802) 353-0920.

Sincerely,

John R. Fiske

John Fiske
VELCO Project Manager

Enclosure: Attachment A
cc: Service List per Certificate of Service



NOTES:

1. ORTHOIMAGERY OBTAINED FROM VERMONT CENTER FOR GEOGRAPHIC INFORMATION, ACQUIRED IN 2023.
2. BOUNDARY LINES OBTAINED FROM PARCEL DATASETS AVAILABLE ON THE VERMONT OPEN GEODATA PORTAL, THIS PLAN DOES NOT CONSTITUTE A BOUNDARY SURVEY.
3. VEGETATION REMOVAL AREAS PRODUCED FROM A COMBINATION OF GROUND SURVEY AND LIDAR BASED VEGETATION DATA.

COLOR KEY

- EXISTING INFRASTRUCTURE TO REMAIN
- EXISTING INFRASTRUCTURE TO BE REMOVED
- PROPOSED OR RELOCATED INFRASTRUCTURE

LEGEND

- APPROXIMATE BOUNDARY LINE
- SUBSTATION FENCE
- PROPOSED TREE LINE
- UTILITY POLE
- PROPOSED TRANSMISSION STRUCTURE
- DELINEATED WATERS
- WETLAND
- WETLAND BUFFER
- DEER WINTERING AREA
- VEGETATION REMOVAL AREA (SEE NOTE 3)

100 0 100 200 300 400

REV	DATE	DR	CK	DESCRIPTION
0E	3/20/25	JJO	JWK	ISSUED FOR 45-DAY NOTICE
0D	3/11/25	JJO	JWK	DRAFT-PFCD EXPANSION
0C	2/25/25	JJO	JWK	DRAFT-PFCD EXPANSION
0B	2/19/25	JJO	JWK	DRAFT-PFCD EXPANSION
0A	2/6/25	JJO	JWK	DRAFT-PFCD EXPANSION

VELCO

VERMONT ELECTRIC POWER CO., INC.
RUTLAND, VERMONT

SANDBAR SUBSTATION

SITE ORTHO
115 kV YARD

SCALE: AS SHOWN | DRAWN BY: JJO | APPROVED BY:
DATE: 02/06/25 | CHECKED BY: JWK | DATE
SHEET NUMBER: 236-ORTHO | REV.
FILE: