

**STATE OF VERMONT  
PUBLIC UTILITY COMMISSION**

Case No. 25-

Petition of Vermont Transco LLC and Vermont Electric Power Company, Inc. (“VELCO”) 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 Sandbar Station in Milton, Vermont	
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PREFILED TESTIMONY OF WITNESS  
JOHN R. FISKE  
ON BEHALF OF VELCO

June 30, 2025

John R. Fiske’s testimony introduces the other witnesses offering testimony in support of the installation of the Advanced Power Flow Controller at the VELCO Sandbar Station in Milton, Vermont (the “Project”). Mr. Fiske provides an overview of the proposed Project, estimated cost and construction schedule, and explains how this Project addresses the criteria in 30 V.S.A § 248(b)(1), (b)(2), (b)(4), (b)(10), and a subset of (b)(5) requirements.

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## **EXHIBITS**

<b>Exhibit Petitioner JRF-1</b>	<b>Résumé of John R. Fiske</b>
<b>Exhibit Petitioner JRF-2</b>	<b>Rock Removal Specification</b>
<b>Exhibit Petitioner JRF-3</b>	<b>Cost Estimate</b>
<b>Exhibit Petitioner JRF-4</b>	<b>VSPC Review of NTA Screening</b>
<b>Exhibit Petitioner JRF-5</b>	<b>45-day Package</b>
<b>Exhibit Petitioner JRF-6</b>	<b>Excerpts from Town and Regional plans</b>
<b>Exhibit Petitioner JRF-7</b>	<b>Chittenden County Regional Planning Commission Letter</b>
<b>Exhibit Petitioner JRF-8</b>	<b>Aesthetic Analysis Memorandum</b>
<b>Exhibit Petitioner JRF-9</b>	<b>June 21, 2024 VSPC Final Meeting Minutes</b>
<b>Exhibit Petitioner JRF-10</b>	<b>Sandbar Preconstruction Sound Assessment</b>

**PREFILED TESTIMONY OF JOHN R. FISKE**  
**ON BEHALF OF VERMONT ELECTRIC POWER COMPANY, INC.**  
**AND VT TRANSCO LLC**

**Introduction**

1           **Q1. Please state your name, occupation, and business address.**

2           **A1.** My name is John Fiske, and I have been retained by Vermont Electric Power  
3 Company, Inc. and VT Transco LLC (together “VELCO”) for Project Manager Services. I am  
4 an employee of JRF Engineering, PC located in Rutland, Vermont 05701.  
5

6           **Q2. Please describe your education and employment background.**

7           **A2.** I earned a Bachelor of Science Degree in Electrical Engineering from the  
8 University of Vermont and am a Licensed Professional Engineer in the State of Vermont. Prior  
9 to my current employment, I held the position of Director of Engineering at Green Mountain  
10 Power, Manager of Substation Design/Relay Protection, System Protection Engineer, and  
11 Division Engineer at Central Vermont Public Service Corporation. I also worked as a Manager  
12 of Engineering and System Protection Engineer at Vermont Electric Power Company, Inc. in  
13 Rutland, Vermont. My educational and employment background are set forth in more detail in  
14 my résumé, which is attached as **Exhibit Petitioner JRF-1** (Résumé of John R. Fiske).  
15

16           **Q3. Have you previously provided testimony before the Vermont Public Utility**  
17 **Commission (the “Commission” or “PUC”)?**

18           **A3.** Yes, I have provided testimony in numerous PUC Dockets. Most recently, I have  
19 testified in the following case: Docket Nos. 7857 (Randolph 15 Substation), 7887 (Vernon Road

1 Substation Breaker Addition), 8029 (St. Johnsbury Substation 16 Upgrade), 8030 (Woodstock  
2 Substation Upgrade), 8205 (Georgia Interconnection Project), 8308 (Waterbury/Duxbury  
3 Substation); and the 2017 GMP rate case (Case No. 17-3112-INV), Airport Substation (Case  
4 No. 18-2910-PET), the B20, B22 and Lowell Substation upgrade Project (Case No. 19-4464-  
5 PET), East St. Albans installation of two SCADA-controlled capacitor banks and other  
6 Substation upgrades (Case No. 20-0295-PET), North Brattleboro Substation rebuild (Case No.  
7 20-0776-PET), Castleton Substation upgrade (Case No. 20-3966-PET); Putney Substation  
8 upgrade (Case No. 21-1559-PET); Pleasant Street Substation upgrade (Case No. 21-4149-PET);  
9 Richmond Substation upgrade (Case No. 21-5164-PET), Rebuild 46kV Transmission Line  
10 Taftsville Substation to the Windsor Substation, Hydeville Substation Upgrade (Case 22-4230-  
11 PET), VELCO SCAP St. Johnsbury (Case No. 23-3761-PET), Upgrades and resupply of the  
12 46kV Transmission Line 60 (Case No. 24-0636-PET), and Relocation and Rebuild Fair Haven  
13 Substation (Case No. 25-0593-PET).

14  
15 **Q4. What is the purpose of your testimony?**

16 **A4.** My testimony supports the Petition filed by VELCO requesting a Certificate of  
17 Public Good (“CPG”), pursuant to 30 V.S.A. § 248, for approval to install an Advanced Power  
18 Flow Controller at the VELCO Sandbar Station in Milton, Vermont (the “Project”). My  
19 testimony begins with an introduction of the other VELCO witnesses that address specific  
20 Section 248 criteria. I provide an overview and description of the Project and the anticipated  
21 construction schedule and costs, and I also address specific Section 248 criteria, (b)(1), (b)(2),  
22 (b)(4), portions of (b)(5), and (b)(10).

**Q5. Please identify each of the other VELCO witnesses that will submit testimony, as well as the scope of their testimony.**

**testimony, as well as the scope of their testimony.**

**A5.** In support of this Petition, VELCO submits the prefiled testimony with exhibits sponsored by the following witnesses:

sponsored by the following witnesses:

Witness

Subject

Edward McGann

Describes the engineering design of the Project.

Jacob Reed

Provides an assessment of the Project's potential impacts on above-ground and below-ground historic sites, as well as presents the Natural Resource Assessment Report for this Project.

Hantz Pr sum 

Mr. Pr sum  discusses the need for the Project. He also explains how the Project improves system stability and reliability, conforms with the State of Vermont's Electric Energy Plan, and aligns with principles for resource selection.

## I. Project Overview

**Q6. Please describe the Project.**

**A6.** This 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 Sandbar Station Phase Shifting Transformer (PST). The Project will install twelve (12) APFC modules adjacent to the existing Sandbar Station in Milton. The height of the APFC units will be approximately 21 feet. 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, a new 115kV station service, and connection of the APFC into the existing Sandbar Station. The Project will include three lightning masts that will include lighting

(APFC), which is needed to maintain reliability of power in the region by extending the life of

the Sandbar Station Phase Shifting Transformer (PST). The Project will install twelve (12)

APFC modules adjacent to the existing Sandbar Station in Milton. The height of the APFC units

will be approximately 21 feet. 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, a new 115kV station service, and connection of the APFC into the

existing Sandbar Station. The Project will include three lightning masts that will include lighting

1 and security cameras. Lighting will only be used during maintenance events. The existing eastern  
2 fence line of the station will be moved approximately 187 feet to the east and 234 feet to the  
3 north to accommodate the APFC and associated equipment. There will be three new motor-  
4 operated load break switches installed within the existing Sandbar Station. The Project will  
5 require VELCO to relocate sections of the existing K19 115kV transmission line for the  
6 expansion of the station and to provide access for construction and maintenance. Tree clearing  
7 and grading are required to facilitate the station's yard expansion, transmission line relocation,  
8 create natural resource habitat, construction support areas and improve site drainage. The  
9 Project also includes constructing an access drive along the northern end of the existing fence  
10 line to create an access route for construction.

11  
12 **Q7. Why is this Project needed at this time?**

13 **A7.** This Project is needed to extend the life of the Sandbar PST, which controls the  
14 flow across the Sandbar PV20 line preventing overloads on the line. In 2021, the Sandbar PST  
15 experienced an internal failure resulting in the removal of the PST from service. Without the  
16 PST in service, the line remained open for approximately 5 months until another PST could be  
17 relocated from another substation. Long duration outages of this line place the power system  
18 into a contingency configuration that could manifest into large reliability challenges should a  
19 second contingency occur.

20 The analysis of the Sandbar PST 2021 failure indicated excessive tap changes as the  
21 likely cause of the failure. The power flow on the line is increasingly more variable requiring the  
22 PST to perform more tap changes, reducing the life expectancy of the PST. The variability of

1 the flow on the line is expected to continue to increase as the power grid integrates more  
2 renewable sources of generation. The APFC will regulate/moderate this variability to reduce the  
3 number of tap changes the PST is required to perform, thereby extending the life of the PST.

4  
5 **Q8. Please describe the new proposed Advanced Power Flow Controller.**

6 **A8.** The AFPC proposed at the Sandbar Station employs power electronics technology  
7 to control power flows on the PV20 line. The Voltage Source Converter (VSC) technology  
8 selected is a single phase, modular static synchronous compensator that operates at line voltage  
9 and is installed in series with the existing PST. The Project proposes the installation of twelve  
10 (12) APFC modules, 4 per phase capable of controlling power flow by injecting a capacitive or  
11 inductive reactance. The addition of this technology reduces the amount of tap changes required  
12 by the PST. The other benefits of this solution allow for increased precise control of power flow  
13 on the PV20 line, and for some flow control even if the PST is offline. The solution is a modular  
14 design that can be adapted for future needs.

15 Further details regarding the engineering design are provided in the prefiled testimony of  
16 Edward McGann and Hantz Présumé.

17  
18 **Q9. Please describe the transmission line work required for the Project.**

19 **A9.** The K19 transmission line is proposed to be relocated as it leaves the Sandbar  
20 Station to accommodate the station's yard expansion for the APFC. This relocation will require  
21 the installation of new 115kV structures with associated anchoring and hardware. The  
22 transmission line relocation will require tree clearing.



1 Further details regarding the engineering design are provided in the prefiled testimony of  
2 Edward McGann.

3  
4 **Q10. What site preparation work will be needed for installation of the new APFC**  
5 **and other Project work?**

6 **A10.** The site preparation will include tree clearing and grading to facilitate the  
7 station's yard expansion, transmission line relocation, construction support area, the creation of  
8 natural resource habitat, and to improve drainage around the station. The Project also includes  
9 constructing an access drive along the northern end of the existing fence line to create an access  
10 route for construction of the APFC, access to the K19 transmission line, and access to the habitat  
11 creation area.

12  
13 **Q11. Will a construction support area be needed for the Project?**

14 **A11.** Yes, VELCO has designated two construction support areas for the project. One  
15 construction support area is at the VT Transco owned parcel, located at 584 Bear Trap Road.  
16 The second proposed construction support area is along the existing station driveway in an  
17 existing open area.

18  
19 **Q12. Is an outage necessary for Project construction? If so, please describe it.**

20 **A12.** Yes, outages are required for the Project construction. Relocation of the K19 line  
21 is required to expand the station yard and will require an outage for this line work. Additionally,  
22 integration of the APFC into the existing Sandbar Station will require outages while transitioning

1 into and out of the bypass configuration. The bypass will utilize equipment within the existing  
2 station yard. These outages are only expected to occur on station components and transmission  
3 lines, with no anticipated loss of service to customers.  
4

5 **Q13. Will the Project require any blasting?**

6 **A13.** No, VELCO does not anticipate that the Project will require blasting to expand  
7 the station yard or install transmission line structures. However, if blasting becomes necessary,  
8 VELCO will follow its rock removal specification as well as the Vermont Department of  
9 Environmental Conservation (DEC) best management practices (BMPs) for blasting. Please see  
10 **Exhibit Petitioner JRF-2** (Rock Removal Specification). This rock removal specification is  
11 more detailed than the blasting plan that VELCO has submitted as an exhibit in past projects.  
12 VELCO will provide this rock removal specification to contractors and include the Agency of  
13 Natural Resources' (ANR) BMPs. If the ANR updates their BMPs prior to the start of  
14 construction, VELCO will update its rock removal specification.  
15

16 **Q14. Please describe the approach and process for developing the Project's cost**  
17 **estimate.**

18 **A14.** The first step in VELCO's process is to identify the resources required to plan,  
19 design, and construct the Project. VELCO developed the cost estimate using seven categories to  
20 establish the total cost for each Project element. The seven resource categories are as follows (1)  
21 Materials, (2) Labor, (3) Equipment, (4) Indirects, (5) Escalation, (6) Capital Interest, and (7)  
22 Contingency.

1 VELCO developed the Direct Costs (i.e., Material, Labor, and Equipment) using cost  
2 data from projects VELCO recently completed or which are in progress. Specifically, VELCO  
3 used cost data associated with recent VELCO substation and line projects to develop the  
4 material, labor and equipment costs. VELCO utilized vendor cost data for portions of the Project  
5 scope for which VELCO did not have recent actual cost data from its prior projects.

6 VELCO estimated labor and equipment costs using preliminary detailed designs. The  
7 detailed line items for each Project element were estimated into sub-categories following the  
8 Federal Energy Regulatory Commission ("FERC") system of accounts. Developing the cost  
9 estimates by FERC account enhances VELCO's ability to track costs in a manner consistent with  
10 the reporting format of actual costs as required by FERC. Also, escalation costs can be more  
11 accurately calculated by applying the Handy-Whitman cost index to the estimated costs by  
12 FERC account.

13 The Project team also developed the estimated costs for Indirects, Escalation, Capital  
14 Interest, and Contingency.

15 VELCO estimated the Indirect Costs based on the resources required to support the  
16 Project completion by resource category. Resource categories included in the Indirect estimated  
17 costs include: Engineering and Design; Operations; Planning; Communications; Environmental  
18 Engineering; Field Surveys; Impact Mitigation; Aesthetic Impact; Legal Expenses; Regulatory  
19 Permitting and Filings; Administrative Overhead; Mobilization and Demobilization; Project  
20 Management; Construction Supervision; and Project Administration.

21 The Indirect estimated Project costs support services are based on the number of  
22 people/hours (Level of Effort) required to support the particular function, as well as outsourced

1 consulting services for each resource category (e.g. environmental studies, archaeology studies,  
2 engineering and surveying).

3 VELCO Project Controls developed escalation costs by using an anticipated 2024-2028  
4 spending plan and projected Handy-Whitman cost index and consumer price index (CPI).

5 VELCO applied Capital Interest (interest cost during construction) and also followed the  
6 Project spending plan as applied to the escalation cost calculation. The Capital Interest rate is  
7 typically based on the company's credit rating and is subject to change based on the financial  
8 market conditions.

9 Finally, the Project cost estimate also accounts for a contingency of twenty percent  
10 (20%), due to the preliminary detailed designs and the uncertainty and risk associated with the  
11 Project level of definition.

12

13 **Q15. What risk elements did VELCO consider when developing the cost estimate**  
14 **and how were the risks addressed in the cost estimate?**

15 **A15.** Risk elements considered are the Project duration, level of certainty regarding  
16 ground condition for below-grade work, required environmental mitigation measures, volatility  
17 regarding escalation rates, and potential resource constraints at the anticipated time of  
18 construction. Per standard project management practices widely recognized by organizations  
19 such as the Project Management Institute, VELCO applied a contingency to the estimate to  
20 account for these risks. VELCO applied a contingency of 20% to the total estimated cost based  
21 on the current level of Project definition.

22

1           **Q16. What is the total cost estimate for the Project?**

2           **A16.** The total cost of the Project is estimated at \$46,861,237 with contingency.

3       **Exhibit Petitioner JRF-3** (Project Cost Estimate) details the cost estimate.

4  
5           **Q17. Are any portions of the Project expected to be eligible for Pool Transmission**  
6       **Facilities (“PTF”) regionalized cost recovery?**

7           **A17.** As the existing Sandbar Station is a PTF asset and the majority of the Project is an  
8 addition to a PTF transmission line, VELCO expects the new APFC to be considered PTF  
9 funded via the transmission tariff of ISO-NE, with those costs paid by the transmission owners of  
10 New England on a load ratio basis. Vermont’s share of the New England load is approximately  
11 four percent (4%).

12           In accordance with ISO-NE requirements for asset condition projects, a Transmission  
13 Cost Allocation request will be developed and submitted for the PTF costs. VELCO expects the  
14 ISO-NE to formally approve regional cost recovery for the full Project.

15  
16           **Q18. Please describe the potential US Government Federal funding for a portion**  
17       **of this Project.**

18           **A18.** The Project may be partially funded by the United States Federal Government  
19 under Department of Energy (DOE) Cooperative Agreement DE-GD0000908 (DFCA 81.254,  
20 Grid Infrastructure Deployment and Resilience), awarded October 1, 2024 to Electric Power  
21 Research Institute (EPRI) and VELCO.

1 EPRI and VELCO collaborated in a joint effort, with EPRI as the prime and VELCO as  
2 the sub-recipient, to secure the DOE grant. VELCO's portion of this grant is \$13,782,646 with  
3 EPRI receiving the balance. VELCO would be paid on a cost reimbursement basis up to a  
4 Contract Cost Limitation (CCL) of \$13,782,646.

5 Within the last several months, the DOE has requested additional information regarding  
6 the Project to further evaluate the grant awarded in October 2024. Because there remains some  
7 uncertainty as to whether these funds will be provided at present, these funds were not  
8 incorporated into the Project cost estimate. If provided, the DOE grant will reduce the PTF  
9 funding amount required for the Project.

10  
11 **Q19. What is the Project schedule and planned construction hours?**

12 **A19.** We propose to begin Project construction as soon as possible upon receiving the  
13 required permits, approvals, and materials. Currently, the estimated construction schedule is  
14 planned from March 2026 through September 2027, which assumes receipt of a CPG by  
15 February 2026.

16 If the DOE grant is withdrawn, VELCO likely will need to reprioritize and make  
17 adjustments to the timing of other planned projects and its budget in order to cover the additional  
18 \$13.7 million in Project costs. In which case, VELCO would plan to commence construction of  
19 this Project within five years of issuance of a CPG.

20 Construction would take place between the hours of 7:00 A.M. and 7:00 P.M. Monday  
21 through Friday, and between 8:00 A.M. and 5:00 P.M. on Saturdays. No construction will take  
22 place on Sundays, federal holidays, and state holidays with the exception of Bennington Battle

1 Day in August. VELCO requests, however, that these restrictions do not apply to construction  
2 activities that VELCO must perform during any required transmission outages that may be  
3 needed to maintain system reliability. VELCO also respectfully requests that it be allowed to  
4 perform construction activities on Bennington Battle Day given (i) the short summer  
5 construction season, and (ii) that the holiday is not widely granted as a paid day off for the  
6 workers on this Project.

7  
8 **II. Public Outreach [Docket No. 7081]**

9 **Q20. Has the Project development been consistent with the public outreach and**  
10 **transmission planning process contemplated in Docket No. 7081 Memorandum of**  
11 **Understanding (“MOU”)?**

12 **A20.** Yes, VELCO has discussed the Project with the Vermont System Planning  
13 Committee (“VSPC”) and performed non-transmission alternative screening analysis as  
14 contemplated in the MOU. The results of that screening were also discussed at VSPC meetings.  
15 Because the Project is driven by the need to maintain reliability of power in the region by  
16 extending the life of the PST, it was determined, that non-transmission alternative analysis was  
17 not applicable and the Project cannot be avoided by the use of a non-transmission alternative.  
18 See **Exhibit Petitioner JRF-4** (VSPC Review of NTA Screening).

19  
20 **Q21. Please describe VELCO’s public outreach efforts related to this Project.**

21 **A21.** VELCO designed the public outreach efforts to meet the requirements of the  
22 MOU from Docket No. 7081. VELCO specifically reached out to the Town of Milton. Once the

1 Project's need and site details were further refined, VELCO issued a 45-day advance notice on  
2 April 1, 2025 describing the Project to the abutting landowners, the Milton Town Co-Managers,  
3 the Milton Selectboard, the Milton Planning Commission, the Chittenden County Regional  
4 Planning Commission, Department of Public Service (DPS), Agency of Natural Resources,  
5 Vermont Agency of Agriculture, Food, and Marketing, Vermont Division of Historic  
6 Preservation and others pursuant to Commission rules on service of advance notices. All  
7 abutting landowners were invited to a public meeting to provide "face-to-face" interaction for  
8 questions and feedback. The public meeting was scheduled for the convenience of interested  
9 persons and one adjacent landowner of the public attended. The public has been offered other  
10 means of communicating with VELCO including phone and email transmittals. The VELCO  
11 website also provides constant availability for those with internet access to Project information  
12 and provides a means of submitting requests for information via an on-line contact form. Please  
13 see **Exhibit Petitioner JRF-5** (45-day Package).

14  
15 **Q22. Please summarize the public comments VELCO received in response to the**  
16 **45-day advance notice and VELCO's responses to these comments.**

17 **A22.** VELCO did not receive any written responses from the public to the 45-day  
18 advanced notice. The former landowner of the VT Transco property (584 Bear Trap Road)  
19 attended the public meeting out of interest and did not have any specific requests of VELCO. I  
20 summarize the comments received from the regional planning commission below.



**III. Orderly Development [30 V.S.A. § 248(b)(1)]**

**Q23. Will the Project unduly interfere with the orderly development of the region giving due consideration to recommendations from municipal and regional planning commissions and municipal legislative bodies, and land conservation measures included in the municipal plan?**

**A23.** No. The Project involves installing an AFPC to improve reliability of the region's existing electrical supply. The proposed Project is consistent with the Town of Milton 2018 Comprehensive Plan as amended January 3, 2023 ("Town Plan"). Per the Milton Town Plan goals 5.4.2 and 5.4.3, the Town aims to have substations and other similar facilities located within existing corridors and should be placed to minimize their impact on the community and its resources. This Project satisfies those goals by adding equipment at an existing VELCO station. See **Exhibit Petitioner JRF-6**, which contains the relevant sections of the Town and regional plan.

The Chittenden County Regional Planning Commission ("CCRPC") provided its preliminary assessment of the Project within the context of its 2018 Chittenden County ECOS Plan, adopted June 20, 2018, ("CC Regional Plan"). The CCRPC submitted a letter to the Commission on May 7, 2025 (**Exhibit Petitioner JRF-7**) based on its review. In that letter, CCRPC states the following:

CCRPC finds that this project meets the intent of the Energy Goal (Goal #17) of the Plan: "Move Chittenden County's energy system toward a cleaner, more efficient and renewable system that benefits health, economic development, and the local/global climate by working towards the State's Comprehensive Energy Plan goals."

The project is intended to increase the efficiency and reliability of power from the Sand Bar Station; therefore, it meets the goal by benefiting economic development.

1 Further discussion on the consistency of this Project with the Town and Regional Plans is  
2 provided in **Exhibit Petitioner JRF-8** (Aesthetics Analysis Memorandum).

3 The Town of Milton has communicated to VELCO its support for the Project, and we  
4 expect the Town of Milton will provide the Commission with a letter stating its support.

5  
6 **Q24. Has VELCO received any substantive comments from the municipal or**  
7 **regional commissions related to the criteria of 30 V.S.A. § 248(b)? And if so, how has**  
8 **VELCO addressed them?**

9 **A24.** Yes. As discussed above, in response to the April 1, 2025 45-day notice, CCRPC  
10 provided comments on the Project's compliance with relevant goals and policies in the 2018  
11 ECOS Plan. See Exhibit Petitioner JRF-7.

12 The CCRPC also identified, in its May 7, 2025 letter, State and local known and possible  
13 natural resource constraints located on the property site for this Project. VELCO hired VHB to  
14 perform an inventory of natural resource features in the Project area. The items raised by the  
15 CCRPC have been addressed in the testimony and exhibits (including the VHB natural resources  
16 report) provided by VELCO witness Jacob Reed, which demonstrate that this Project will not  
17 have an undue adverse effect on the natural environment. VELCO has been in consultation with  
18 the Agency of Natural Resources during project design taking into consideration State known  
19 constraints. VELCO will continue to work with the appropriate State agencies to properly  
20 address any possible constraints impacted by the Project.

**IV. Need for Present and Future Demand for Service**  
**[30 V.S.A. § 248(b)(2)]**

**Q25. Is the Project required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy-efficiency and load management measures, including those developed pursuant to the provisions of subsection 209(d), section 218c, and subsection 218(b) of V.S.A. Title 30?**

**A25.** Yes. As detailed above, this Project is needed at this time to extend the life of the Sandbar PST, which controls the flow across the Sandbar PV20 line preventing overloads on the line. Energy efficiency and load management actions could not resolve this problem.

**Q26. Can the same benefits be achieved by Non-Transmission Alternatives?**

**A26.** No. VELCO presented the proposed Project to the Vermont System Planning Committee (VSPC) Geographic Targeting Subcommittee. The Geographic Targeting Subcommittee concluded that the Project screened out of the VSPC's test for Non-Transmission Alternative (NTA) analysis. Thus, VELCO did not perform an NTA analysis. Please see **Exhibit Petitioner JRF-9** (June 21, 2024 VSPC Geographic Targeting Subcommittee Draft Meeting Minutes).

**Q27. Did VELCO review this Project with the Vermont distribution utilities?**

**A27.** Yes, VELCO discussed the Project with all potentially affected Vermont distribution utilities and has provided presentations to the VELCO Operating Committee, which includes VELCO and Vermont distribution utilities.

1           **Q28. Has VELCO considered and assessed whether the proposed Project**  
2 **represents the least-cost alternative to resolving the deficiencies discussed above?**

3           **A28.** Yes. VELCO has selected the least cost option for the solution. VELCO issued a  
4 Request For Information (RFI) to five companies for a power flow control device to reduce  
5 tapping on the existing PST. Of the five companies solicited, two (2) recommended another PST  
6 in parallel or series, two (2) did not have an offering available, and one (1) offered the APFC  
7 device proposed for the project.

8           VELCO's comparison of the second PST solution versus the APFC solution revealed a  
9 half replacement APFC in series with the existing PST was the least cost solution by over 15%  
10 without the DOE grant taken into account, and the most rapidly deployed solution. The selected  
11 alternative would reduce the number of PST tap changes, provide some redundancy allowing the  
12 line to remain in service with the PST out of service, and increase the control range with the  
13 APFC and PST in service. Additionally, the APFC provides control that is more precise,  
14 technology diversity, modular design, and a significantly shorter lead-time than a PST. This  
15 selected alternative for this Project is the most cost-efficient alternative that provides the  
16 necessary operational requirements and can be implemented in the near term to extend the life of  
17 the PST.

1           **Q29. Can the introduction of demand side management (“DSM”) or distributed**  
2 **generation (“DG”) alleviate the need for the Project?**

3           **A29.** No. The need for the Project is to extend the life of the existing PST by reducing  
4 its number of tap changes, DSM or DG cannot provide a direct replacement for this project.  
5

6                                   **VI. Economic Benefit to the State [30 V.S.A. §**  
7   **248(b)(4)]**

8           **Q30. Will the Project result in an economic benefit to the State?**

9           **A30.** Yes. The Project will create economic and reliability benefits for the citizens of  
10 Vermont by adding infrastructure to prevent overloading the Sandbar PV20 line. The APFC will  
11 reduce the PST tap changes resulting in less maintenance and outage costs related to the PST.  
12 The Project will increase property tax revenues based on the capital investment required for the  
13 upgrades. Additionally, there will be some local economic benefits associated with engaging  
14 local businesses and contractors during the Project’s construction phase.  
15

16                                   **VII. Air Pollution (Noise), Public Health and Safety**  
17   **[30 V.S.A. § 248(b)(5)]**

18           **Q31. Has VELCO evaluated the Project’s sound impacts?**

19           **A31.** Yes. VELCO retained Vanasse Hangen Brustlin, Inc. (“VHB”) to conduct a pre-  
20 construction sound monitoring study to determine the existing sound conditions at the Sandbar  
21 Station, and closest residences. VELCO also retained VHB to model the estimated sound level  
22 changes that would occur as a result of installing SmartValves in the Sandbar Station. Please see  
23 **Exhibit Petitioner JRF-10** (Sandbar Preconstruction Sound Assessment).

1           **Q32. Please describe the results of the sound monitoring.**

2           **A32.** VHB performed short-term sound monitoring of the Sandbar Station to capture  
3 the sound emissions of the existing station and long-term sound monitoring at the closest  
4 residences to determine the ambient sound levels at the property lines.

5           A long term sound monitoring (LT1) unit was set up at the property line of 4 Cub Road.  
6 which is the nearest residential property line to the Sandbar Station and located approximately  
7 800-feet southwest of the existing transformer. At LT1, 4 Cub Road, the existing daytime sound  
8 levels ranged from 49 dBA to 67 dBA (L90) and during the nighttime, sound levels ranged from  
9 30 dBA to 64 dBA (L90). Observations indicated that while in operation, the transformer was  
10 not audible from LT1 at 4 Cub Road. Traffic on U.S. Route 2 was the dominant source of sound  
11 for LT1. For example, VHB noted that, “[r]eview of the monitoring data indicates that there is  
12 substantially less vehicular traffic on Route 2 from 10:00 PM until 5:00 AM, with L90 sound  
13 levels in the 30’s dBA compared to other hours of the day in the 60’s dBA.” See Exhibit  
14 Petitioner JRF-10 at 5.

15           VHB’s sound study included sound prediction modeling. The sound modeling effort  
16 demonstrated that the maximum predicted sound levels of the proposed Project at the nearest  
17 residential building, 4 Cub Road, would be 38.2 dBA. This would be approximately 2 dBA  
18 below the ANSI Standard of 40 dBA at the nearest residential building during the nighttime and  
19 would be within the range of measured ambient sound levels at 4 Cub Road. As such, the Project  
20 as proposed is not anticipated to result in any unduly adverse sound conditions.

21

**Q33. Will the Project have any adverse effects on the health, safety, or welfare of the public or adjoining landowners?**

**the public or adjoining landowners?**

**A33.** No. VELCO will design and construct the Project in accordance with National Electrical Safety Code requirements. VELCO will adhere to prudent utility construction practices throughout the construction phase to not endanger the public or adjoining landowners.

Electrical Safety Code requirements. VELCO will adhere to prudent utility construction

practices throughout the construction phase to not endanger the public or adjoining landowners.

**VIII. Transportation Systems/Traffic |10 V.S.A. § 6086(a)(5)|**

6086(a)(5)]

**Q34. Please describe the Project's potential impacts with respect to use of public roads.**

**roads.**

**A34.** The Project poses no long-term traffic impacts in Milton. VELCO anticipates only minor, short duration traffic impacts, if any, due to deliveries of equipment and material to the station site during the construction period. Such deliveries will use existing roads with vehicles that are commonly used on public roads. During delivery of any large equipment, VELCO will employ the services of traffic control personnel to manage traffic flow as needed. VELCO will obtain any required highway permits associated with the work and deliveries.

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the station site during the construction period. Such deliveries will use existing roads with

vehicles that are commonly used on public roads. During delivery of any large equipment,

VELCO will employ the services of traffic control personnel to manage traffic flow as needed.

VELCO will obtain any required highway permits associated with the work and deliveries.

**Q35. Will the Project require the construction of new access roads?**

**A35.** Yes, VELCO does propose a new construction access beginning immediately adjacent to the entrance of VELCO's existing access road. This access road will provide access to the APFC yard, the K19 transmission line corridor, and the habitat creation area. Please see the prefiled testimony of Jacob Reed for further information.

adjacent to the entrance of VELCO's existing access road. This access road will provide access

to the APFC yard, the K19 transmission line corridor, and the habitat creation area. Please see

the prefiled testimony of Jacob Reed for further information.

1       **Q36. Will the Project affect railway, waterway, or air transportation?**

2       **A36.** No, the project will not affect railway, waterway, or air transportation.  
3

4                               **IX. Educational & Municipal Service [10 V.S.A. §**  
5   **6086(a)(6)&(7)]**

6       **Q37. What impact will the Project have on educational and municipal services?**

7       **A37.** The Project is not anticipated to have any impact on educational or municipal  
8 services because it will not create the need for any additional educational or municipal services.  
9

10                              **X. Aesthetics [30 V.S.A. § 248(b)(5), 10 V.S.A. §**  
11    **6086(a)(8)]**

12       **Q38. Will the Project adversely impact aesthetics?**

13       **A38.** No. VELCO retained T.J. Boyle Associates, LLC (Boyle) to review and assess the  
14 potential aesthetic impact associated with this Project and prepare a report of its findings, which  
15 is attached as Exhibit Petitioner JRF-8 (Aesthetic Analysis Memorandum).

16       Boyle's analysis concludes that the Project will not result in an undue adverse impact on  
17 aesthetics and scenic and natural beauty of the area because the Project is not likely to have any  
18 significant visibility from roads or other locations surrounding the Project site. The site already  
19 incorporates existing mitigation, and no additional mitigation is recommended by Boyle.  
20

21                              **XI. Development Affecting Public Investments [10**  
22    **V.S.A. § 6086(a)(9)(K)]**

23       **Q39. Will the Project unnecessarily or unreasonably endanger any public or**  
24 **quasi-public investment in the facility, service, or lands, or materially jeopardize or**



1 **interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or**  
2 **access to the facility, service, or lands?**

3 **A39.** The Project will not unnecessarily or unreasonably endanger any public or quasi-  
4 public investment in any facility, service, or lands, or materially jeopardize or interfere with the  
5 function, efficiency, or safety of, or the public's use or enjoyment of or access to any facility,  
6 service, or lands. Other than the limited impacts on nearby roads as discussed above under the  
7 transportation criterion, no other public investments will be affected by the Project.

8  
9 **XIV. Impact on Vermont Utilities and Customers [30**  
10 **V.S.A. §248(b)(10)]**

11 **Q40.** Can existing or planned transmission facilities serve the Project without  
12 creating an undue adverse effect on Vermont utilities, customers, or existing transmission  
13 facilities?

14 **A40.** Yes. Existing transmission facilities can serve the Project without creating an  
15 undue adverse effect on Vermont utilities and customers. The proposed Project consists of an  
16 APFC installation at an existing station that is designed to enhance the existing utility system and  
17 to improve service to customers. VELCO has, and will continue to, coordinate the work with  
18 Vermont utilities to minimize impacts during construction and ensure worker safety.

1

**Conclusion**

2

**Q41. Does this conclude your testimony at this time?**

3

**A41. Yes, it does.**

**DECLARATION OF JOHN R. FISKE**

I declare that the testimony and exhibits that I have sponsored are true and accurate to the best of my knowledge and belief and were prepared by me or under my direct supervision. I understand that if the above statement is false, I may be subject to sanctions by the Commission pursuant to 30 V.S.A. § 30.

June 30, 2025  
Date

/s/ John R. Fiske  
JOHN R. FISKE