STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. _____

Petition of Vermont Transco LLC, and Vermont Electric Power Company, Inc. (collectively, "VELCO"), for a Certificate of Public Good pursuant to 30 V.S.A. § 248 authorizing upgrades to VELCO's existing Middlebury Substation, located in Middlebury, Vermont

PREFILED TESTIMONY OF DAN POULIN
ON BEHALF OF VERMONT ELECTRIC POWER COMPANY, INC.

This testimony and associated exhibits have been filed ePUC other than the identified confidential document

January 17, 2023

Dan Poulin's testimony introduces the other witnesses offering testimony in support of the so-called "Middlebury Project," provides an overview of the proposed Project's scope, cost and schedule, and explains how the Project addresses a subset of the § 248 criteria.

TABLE OF CONTENTS

EXHIBITS

Exhibit Petitioner DP-1	**Résumé of Dan Poulin**
Exhibit Petitioner DP-2	**VELCO Condition Assessment (Filed Under Seal as Critical Energy Infrastructure Information and Other Confidential)**
Exhibit Petitioner DP-3	**Middlebury Vegetation Clearing Plan**
Exhibit Petitioner DP-4	**Project Cost Estimate Summary**
Exhibit Petitioner DP-5	**45 Day Package**
Exhibit Petitioner DP-6	**Town and Regional Plan Excerpts**
Exhibit Petitioner DP-7	**May 21, 2021 VSPC Meeting Minutes**
Exhibit Petitioner DP-8	**Town Letter of Support**

PREFILED TESTIMONY OF DANIEL POULIN
ON BEHALF OF VERMONT ELECTRIC POWER COMPANY, INC.

1. Introduction

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

A1. My name is Daniel Poulin. I am employed by Vermont Electric Power Company, Inc. ("VELCO") as a Project Manager. My business address is 366 Pinnacle Ridge Road, Rutland, Vermont 05701.

Q2. Please describe your education and employment background.

A2. I received my Bachelor of Science degree in Electrical Engineering from Northeastern University in 1989 and my Masters of Business Administration degree from the University of Oregon in 1999. I have been employed by VELCO since 2007. During my career, I have worked for a number of electric utility companies where I have held both engineering and management positions. I am a registered Professional Engineer in the state of Vermont. Specific information regarding my work experience is detailed in my resume, attached as Exhibit Petitioner DP-1.

Q3. Have you previously provided testimony before the Vermont Public Utility Commission ("PUC")?

A3. Yes, I provided testimony in Docket No. 8205, the Georgia 115/34.5kV 3 Interconnection Project; Docket No. 8385, the Newport Project; Docket No. 8605,

the Connecticut River Valley Project; and Docket No. 8685, Case No. 18-1102-PET, authorizing the installation of equipment at the Coolidge Substation to allow for interconnection of the Coolidge Solar Project, Case No. 20-3506, the Irasburg Project, Case No. 22-4258, the Florence Project, and Case No. 22-4338, the Highgate Project

2. Testimony Overview

Q4. What is the purpose of your testimony?

A4. My testimony supports the Petition by VELCO for a Certificate of Public Good ("CPG") pursuant to 30 V.S.A. § 248 with respect to upgrading VELCO's existing substation located at 522 Quarry Road, Middlebury, Vermont (the "Project"). My testimony: (1) introduces the other witnesses offering testimony in support of the Project; (2) provides an overview of the proposed Project and the proposed schedule for Project completion and timing of needed CPG approvals; (3) provides a summary cost estimate and the expected cost treatment; and (4) explains how the proposed Project addresses a subset of the criteria under Section 248.

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

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

Witness	Subject
Ed McGann	Discusses the engineering and design details for the substation and addresses public health and safety
Jacob Reed	Provides an assessment on the environmental and historic sites criteria for the Project and VELCO's waste disposal methods
Mike Buscher	Discusses the Project's compliance with the aesthetic criterion

Q6. Please describe the existing VELCO Middlebury substation, and noteworthy historical events.

A6. VELCO purchased the Middlebury substation from CVPS in 1958. VELCO's 115/46 kV Middlebury substation was constructed in 1970 with various modifications and improvements over the nearly fifty years of service. The substation is connected to the VELCO 115 kV electric transmission network in Rutland County, Vermont, and connects to Green Mountain Power's (GMP) 46 kV system in the Middlebury area. The substation has a radial design.

Q7. Please describe the primary deficiencies of the existing Middlebury substation and proposed solutions.

A7. VELCO developed an evaluation tool that it used to conduct a condition assessment of the substation. VELCO is providing the Substation Condition Assessment (Assessment), under seal as Confidential, as Confidential Exhibit Petitioner DP-2. The Assessment identified the need to replace some of the equipment due primarily to condition, but design standards and operating practices were also taken into

consideration. The primary deficiency is the control building. To correct this deficiency, VELCO proposes to replace the existing control building with a larger control building, and replace and expand a portion of the existing fence to accommodate the new control building on the northeast side of the existing facility. This work will require VELCO to expand the fence by approximately 30 feet on the east side, and approximately 72 feet on the north side to accommodate the new control building. In addition, there is currently a stream that runs through a culvert beneath the substation and VELCO will take this opportunity to relocate the stream through a culvert located beneath the ground along the southern fence line. VELCO will also be shortening its existing access road to accommodate the expanded fence area and will install a turnout area to allow vehicles to safely turnaround without having to enter the fenced substation. VELCO also plans to replace the existing circuit switcher located on the high voltage side of the transformer with a circuit breaker. Ed McGann will provide an explanation of the benefits of this change. VELCO will address other elements of the substation by in-kind replacement and modifications of the existing equipment. Below, I describe the major elements of the Assessment and recommendations. Mr. McGann's testimony and exhibits include further engineering and design details of the proposed substation upgrades.

The existing 20' x 28' steel control building is from the original 1957 build. The Assessment revealed that the control building's physical size will not adequately house the proposed upgrades necessary for the new P&C equipment, telecommunication equipment and batteries, and still retain necessary maintenance

work space clearance on the equipment. In addition, the existing hydrogen exhaust system results in high heating and cooling losses in terms of building efficiency. Please see Confidential Exhibit Petitioner-DP-2, at pages 13-14.

VELCO proposes to construct a new building of approximately 32' x 60' to adequately house the proposed P&C equipment, DC station service, AC station service, telecommunication equipment, security systems, and other ancillary systems. Disposal of the existing control building will be done in accordance with VELCO's disposal practices as further discussed in Jacob Reed's prefiled testimony under the waste disposal criterion.

To maintain electrical transmission while executing corrective actions with minimal necessary outages, VELCO proposes to use a temporary substation, which consists of mostly mobile components located on trailers. The proposed location of the temporary substation will be to the southwest of the existing substation. This temporary facility will maintain electrical transmission by routing the lines through its equipment while the existing substation is taken out of service and deficiencies are corrected. VELCO will energize the existing substation upon completion of the corrective measures and then remove the temporary substation and all associated temporary infrastructure within nine months. The proposed temporary substation will require VELCO to install temporary 115 kV and 46 kV structures and conductors. It will also require VELCO to slightly grade the area, lay down matting, and install a temporary ground grid with stone. VELCO will also need to

install a temporary access road as further described in Ed McGann's prefiled testimony.

The existing oil containment consists of a perimeter berm. As part of its maintenance program, VELCO will install a new passive secondary oil containment system for the existing transformer. Please see the prefiled testimony of Ed McGann and Jacob Reed for more information on the secondary oil containment. Please see Confidential Exhibit Petitioner-DP-2, at page 13.

Q8. In summary, please describe the Project's major substation components.

A8. To address the noted deficiencies at the Middlebury substation, VELCO proposes to install/perform the following major components:

- Replace the existing control building with a larger control building that can accommodate a new protection and control system, redundant AC & DC station services, communication equipment, security systems and new bathroom facilities

- Replace the existing perimeter fence and expand the northeast substation yard area to accommodate new control building

- Replace water supply & wastewater systems for control building facilities

- Install a temporary substation and associated temporary access road, poles and conductors, and temporary fenced-in yard to maintain electrical transmission for the Project's duration (all components of the temporary substation will be removed and the area retuned to existing conditions within 9 months of commissioning the permanent substation)

- Reroute an existing stream that presently runs through the middle of the substation in an underground culvert so it runs along the southern fence line in an underground culvert

- Shorten and revise existing access road

- Replace the oil containment system for the transformer (typically maintenance work that does not require any regulatory procedures but is included as a component of this project)

Mr. McGann's testimony includes exhibits detailing further engineering and design details of the substation upgrades.

Q9. Please describe the proposed vegetation clearing plan for the Project.

A9. VELCO will also need to perform vegetation clearing to accommodate the expanded area for the new control building and at the outlet of the rerouted stream. VELCO will need to remove approximately 2,000 square feet of vegetation to construct the Project. Of this amount, VELCO plans to remove 2 evergreen trees approximately 15 feet in height that will be within the proposed fence area. Please see Exhibit Petitioner DP-3 (Middlebury Vegetation Clearing Plan).

Q10. Will the Project require any blasting?

A10. No.

Q11. Please describe the approach for developing the Project's cost estimate.

A11. The first step was to identify the resources required to plan, design, and construct the Project. VELCO developed the cost estimate utilizing seven categories to establish the total cost for each Project element. The seven resource categories are as follows:

- Material
- Labor
- Equipment
- Indirects
- Escalation
- Capital Interest
- Contingency

Q12. Please summarize the process used to develop the direct and indirect costs.

A12. VELCO developed the Direct Costs using cost data from projects VELCO recently completed or which are in progress. Specifically, VELCO used cost data associated with recent VELCO substation and line projects to develop the material, labor and equipment costs. VELCO utilized vendor cost data for portions of the Project scope for which VELCO did not have recent actual cost data from its prior projects.

VELCO estimated labor and equipment costs using preliminary detailed designs. The detailed line items for each Project element were estimated into sub-categories following the Federal Energy Regulatory Commission ("FERC") system of accounts. Developing the cost estimates by FERC accounts enhances VELCO's ability to track costs in a manner consistent with the reporting format of actual costs

as required by FERC. Also, escalation costs can be more accurately calculated by applying the Handy-Whitman cost index to the estimated costs by FERC account.

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

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

The Indirect estimated Project costs support services are based on the number of people/hours (Level of Effort or LOE) required to support the particular function as well as outsourced consulting services for each resource category (e.g. archaeology studies, engineering, and surveying, etc.).

VELCO Project Controls developed escalation costs by using an anticipated 2022-2025 spending plan and projected Handy-Whitman cost index and consumer price index (CPI).

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

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

Q13. What is the total cost estimate for the VELCO Components based on the various cost elements and resource categories described?

A13. The total cost of the Project is estimated at $17,357,013. The total cost estimate is comprised of $7,010,506 of Direct Costs (encompassing Material, Labor and Equipment), $5,523,943 of Indirect Costs, $1,030,378 in Escalation, $914,570 in Capital Interest, and $2,877,616 in Contingency. Please refer to Exhibit Petitioner DP-4 for a cost summary by resource category and Project elements.

Q14. What is the design basis for the substation's Direct cost estimate?

A14. The Direct cost estimate is based on the General Arrangement Plans and the One-Line Diagram as presented in Mr. McGann's testimony and exhibits.

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

A15. Risk elements considered are the Project duration, level of certainty regarding ground condition for below grade work, required aesthetic and environmental mitigation measures, volatility regarding escalation rates, temporary configurations necessary to support construction and potential resource constraints at the anticipated time of construction. Per standard project management practices widely recognized by organizations such as the Project Management Institute, VELCO applied contingency to the estimate to account for these risks.

As described in my testimony, VELCO applied a contingency of 20% to the total estimated cost based on the current level of Project definition.

Q16. Are any portions of the Project upgrades expected to be eligible for Pool Transmission Facilities ("PTF") regionalized cost recovery?

A16. Yes. It is estimated that $8,993,924 of the total Project costs will be eligible for PTF recovery. The existing substation contains PTF, non-PTF and general plant facilities. The total Project costs are allocated among these classifications on a percentage basis. Please see Exhibit Petitioner DP-4 for the breakdown.

Q17. What is the Project schedule?

A17. We propose to begin Project construction as soon as possible after receiving the required permits and approvals. Currently, the estimated construction schedule is

from June 2023 with a targeted completion date of June 2024. This assumes receipt of a CPG by the end of May 2023. A failure to achieve this schedule will likely have adverse impacts on Project execution and overall Project cost.

Construction would take place between the hours of 7:00 A.M. and 7:00 P.M. Monday through Friday, and between 8:00 A.M. and 5:00 P.M. on Saturdays. No construction will take place on Sundays, or state or federal holidays, although VELCO seeks to conduct activities on Bennington Battle Day given the short summer construction season, and the holiday is not widely granted as a paid day off for many of the workers likely to be working on the Project. VELCO requests, however, that these restrictions do not apply to: 1) construction activities that VELCO must perform during any required outages that may be needed to maintain system reliability; and 2) work that VELCO must perform related to filling the power transformer with oil.

VELCO also requests permission to commence construction without having first obtained the required Wastewater System and Potable Water Supply Permit and the Division of Fire Safety Permit. VELCO seeks exemption from the standard condition that requires acquisition of all state and federal permits prior to the start of construction. Although VELCO anticipates the receipt of the Wastewater System and Potable Water Supply Permit and Division of Fire Safety Permit prior to the start of construction, the acquisition of these two permits may not occur prior to when VELCO is prepared to begin site preparation and construction activities

that are not subject to these two permits. Specifically, VELCO would like to begin the following activities upon receipt of a final order and CPG: equipment demolition, vegetation clearing, site grading, and installation of temporary equipment.

3. <u>Criteria on Public Outreach [Docket No. 7081]</u>

Q18. Has the Project development conformed to the transmission planning requirements approved in the Memorandum of Understanding (MOU) of Docket No. 7081?

A18. Yes.

Q19. Please describe VELCO's public outreach efforts related to this Project.

A19. VELCO designed the public outreach efforts to meet the requirements of the MOU from Docket No. 7081. VELCO specifically reached out to the local community in Middlebury. Once the Project's need and site details were further refined, VELCO issued a 45-day advance notice describing the Project to the abutting landowners, the Town of Middlebury Select Board, the Town of Middlebury Planning Commission, the Addison Regional Planning Commission, Department of Public Service, Agency of Natural Resources (ANR), and Vermont Division of Historic Preservation. VELCO Project staff met with the Town of Middlebury Select Board, Town of Middlebury Planning Commission and the Addison Regional Planning Commission regarding the Project. There were no comments or concerns raised in these meetings that VELCO had not already planned to address as part of the Project's construction. VELCO invited all stakeholders to a virtual

public meeting to provide interaction for questions and feedback. The public meeting was scheduled for the convenience of interested persons and no members of the public attended. The public has been offered other means of communicating with VELCO including phone and email transmittals. Please see Exhibit Petitioner DP-5 (45-day Package).

Q20. How did VELCO address the comments and input that were received from the public outreach efforts, and did VELCO receive comments in response to its 45-day notice?

A20. VELCO personnel provided responses and clarifications to questions asked by Town staff and Board members during their presentation to the Town of Middlebury Select Board. Please also note that VELCO did not receive comments in response to its 45-day notice.

4. <u>Orderly Development [30 V.S.A. § 248(b)(1)]</u>

Q21. Will the Project unduly interfere with the orderly development of the region?

A21. No. The Project will have a favorable impact on the orderly development of the region in that it will improve the reliability of the region's existing electrical supply while not adversely impacting the environment or aesthetics. The proposed Project is consistent with the 2017 Town of Middlebury Town Plan ("Town Plan") and the Town has issued a letter of support for the Project, Exhibit Petitioner DP-8. The Town Plan contains no land conservation measures for the Project parcel or language addressing the construction or operation of substations for reliability

purposes. The Town Plan identifies the VELCO Middlebury Substation and states: "The existing Vermont Electric Power Company (VELCO) 115/345 kV transmission corridor runs through Middlebury with a major substation on Quarry Road. This corridor has a 350' right of way width through most of Middlebury." Exhibit Petitioner DP-6 (Town Plan at 124). The Town Plan identifies important scenic resources, (Town Plan at 30), and as discussed in the prefiled testimony of Mike Buscher, the Project will have no impact on these scenic resources. The Project complies with the Town Plan.

VELCO also examined the Addison County Regional Planning Commission's (RPC) 2018 Regional Plan updated February 9, 2022 ("RPC Plan"). The RPC Plan does not provide land conservation measures regarding the Project parcel where VELCO seeks to install the upgrades. The RPC Plan acknowledges that VELCO owns transmission infrastructure in Middlebury, Vermont. Exhibit Petitioner DP-6 (RPC Plan at 7-48).

The RPC Plan contains generally applicable design standards for electric substation facilities. The substation siting standards identify "Good sites", that include "Systems located in close proximity to existing larger scale, commercial, industrial or agricultural buildings." Exhibit Petitioner DP-6 (RPC Energy Plan a 7-97 to 7-98). The Project is located on a good site because it is an upgrade to an existing substation, the upgrades will occur on the same parcel, and the upgrades will be adjacent to existing electrical infrastructure. VELCO's aesthetic expert, Mike

Buscher, has prepared an aesthetic report wherein he concluded that the Project has no adverse impact on aesthetics or the scenic or natural beauty.

The Project gives due consideration to the RPC substation design goals as the Petitioner proposes to locate the Project where an existing substation exists. Because the RPC Plan did not contain any applicable land conservation measures, the Project is consistent with the RPC Plan.

5. <u>Need for Present and Future Demand for Service [30 V.S.A. § 248(b)(2)]</u>

Q22. 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?

A22. Yes. The VELCO Middlebury substation's condition as discussed above is the main driver of the need for the proposed Project. Energy efficiency and load management actions could not resolve these problems.

VELCO presented the proposed Project to the Vermont System Planning Committee (VSPC) Geotargeting Subcommittee. The Geotargeting 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 DP-7 May 21, 2021 VSPC Meeting Minutes. VELCO

presented the Project and NTA screening form at the meeting, which does not require specific project design details and cost information.

Q23. Could the same benefits be achieved by transmission alternatives?

A23. No. Because the need for the Project is based on the condition of an existing substation, VELCO did not perform a Transmission Alternatives (TA) analysis.

Q24. Has VELCO considered and assessed whether the proposed Project represents the least-cost alternative to resolving the deficiencies discussed above?

A24. Yes, the Assessment demonstrated that VELCO needs to address condition-related concerns at the exiting substation. The Assessment is attached as Confidential Exhibit Petitioner DP-2. Furthermore, VELCO followed the MOU with the Department of Public Service (DPS) under Docket No. 8385, which included the preliminary review of project alternatives and estimated costs with DPS staff.

6. <u>System Stability and Reliability [30 V.S.A. § 248(b)(3)]</u>

Q25. What impact will this upgrade have on system stability and reliability?

A25. The Project will have no adverse impact on the stability and reliability of VELCO's transmission system. In fact, the Project will improve system safety and reliability by replacing equipment of less than adequate condition.

7. <u>Economic Benefit to the State [30 V.S.A. § 248(b)(4)]</u>

Q26. Will the Project result in an economic benefit to the State?

A26. Yes. The Project will create economic and safety benefits to the citizens of Vermont. The Project will increase property tax revenues based on the capital investment required for the upgrades. Additionally, there will be some local economic benefits associated with engaging local businesses and contractors during the Project's construction phase.

8. <u>Public Health and Safety [30 V.S.A. § 248(b)(5)]</u>

Q27. Will the Project have any adverse effects on the health, safety, or welfare of the public or adjoining landowners?

A27. No. VELCO will design and construct the Project in accordance with National Electric Safety Code requirements. The Company will adhere to prudent utility construction practices throughout the construction phase, and the Project will not endanger the public or adjoining landowners. VELCO will operate and maintain the substation equipment installed as part of this Project in the same safe manner that the Company operates and maintains all of its facilities.

9. <u>Transportation Systems/Traffic [10 V.S.A. § 6086(a)(5)]</u>

Q28. Please describe the Project's potential impacts with respect to use of public roads.

A28. The Project poses no long-term traffic impacts in the Town of Middlebury. VELCO anticipates only minor, short duration traffic impacts, if any, due to deliveries of equipment and material to the substation site during the construction period (expected to be from June 2023 to June 2024). 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. VELCO will obtain all required highway permits associated with the work and deliveries.

Q29. Will the Project affect railway transportation?

A29. No. VELCO does not anticipate that the Project will impact railway transportation.

Q30. Where will VELCO store equipment during construction?

A30. VELCO will use the existing substation parcel and VELCO right-of-way easements to stage any material needed during construction. These staging areas are within the Project area that VELCO studied for impacts to environmental criteria.

10. <u>Educational & Municipal Service [10 V.S.A. § 6086(a)(6)&(7)]</u>

Q31. What impact will the Project have on educational and municipal services?

A31. The Project will not have any impact on educational or municipal services. With respect to educational services, the Project will not add any new students to the affected municipality. Thus, the Project will not place an unreasonable burden on the ability of a municipality to provide educational services because the Project will not require or affect educational services.

With respect to municipal services, the Project does not require any fire or police services beyond those typically required of other businesses, and what is currently

required for the Middlebury substation. Jacob Reed's prefiled testimony discusses VELCO's plans regarding limited disposal of sanitary waste.

11. Development Affecting Public Investments [10 V.S.A. § 6086(a)(9)(K)]

Q32. What impact will the Project have on public investment in a public resource?

A32. The Project will not unnecessarily or unreasonably endanger any public or quasi-public investment in any facility, service, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to any facility, service, or lands.

12. Compliance with Integrated Resource Plan [30 V.S.A. § 248(b)(6)]

Q33. Is the Project consistent with VELCO's least cost Integrated Resource Plan?

A33. VELCO does not have an integrated resource plan. As a transmission-only company, VELCO periodically produces transmission studies. Specifically, VELCO issued a 2021 Vermont Long-Range Transmission Plan. The 2021 Plan explains on page 15 that:

> In addition, from time to time, VELCO must make improvements to its system to replace obsolete equipment, make repairs, relocate a piece of equipment, or otherwise carry out its obligations to maintaining a reliable grid. While VELCO has a process in place for identifying degraded equipment before failures occur, equipment degradation sometimes happens unexpectedly, and VELCO addresses these concerns quickly. The transmission plan requirements are not meant to include those asset condition or routine projects that are undertaken to maintain existing infrastructure in acceptable working condition.

13. Compliance with Vermont Electric Energy Plan [30 V.S.A. § 248(b)(7)]

Q34. Is the Project consistent with the 2022 Comprehensive Energy Plan?

A34. Yes. Vermont's Comprehensive Energy Plan identifies objectives that utilities must meet in serving the public interest, such as serving its customers at the lowest life-cycle costs, including environmental and economic costs, and reducing greenhouse gas emissions. The CEP "balances the principles articulated in 30 V.S.A. § 202a of energy adequacy, reliability, security, and affordability, which are all essential for a vibrant, resilient, and robust economy and for the health and well-being of all Vermonters." CEP executive summary at 1. The CEP also acknowledges that the "grid needs to continue to perform — to reliably deliver the required energy to customers, every hour of the year, to and from resources that are exponentially more distributed, diverse, and variable, under increasing pressure from severe weather events and cyberattacks, while weaning off fossil resources and staying affordable. CEP at ES-24. The CEP states that Vermont's overarching goal for the grid should be "A secure and affordable grid that can efficiently integrate, use, and optimize high penetrations of distributed energy resources to enhance resilience and reduce greenhouse gas emissions." CEP at page 60. The Project strikes the proper balance between these objectives. Specifically, VELCO has proposed a Project that restores and maintains system reliability and safety. Moreover, VELCO's proposal to perform the Project in an area that already hosts other electric infrastructure limits the environmental impact. VELCO's analysis above demonstrates that the Project is the least-cost option. VELCO has asked the

Department for a determination under 30 V.S.A. § 202(f) that the Project is consistent with the 20-Year Plan.

14. Impact on Vermont Utilities and Customers [30 V.S.A. §248(b)(10)]

Q35. Can existing or planned transmission facilities serve the Project without creating an undue adverse effect on Vermont utilities, customers, or existing transmission facilities?

A35. Yes. Existing transmission facilities can serve the Project without creating an undue adverse effect on Vermont utilities and customers. The proposed Project is designed to enhance the existing utility system and to improve service to customers. VELCO has, and will continue to coordinate the work with GMP to minimize impacts during construction and ensure worker safety.

15. Conclusion

Q36. Does this conclude your testimony at this time?

A36. Yes, it does.