

**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(j) authorizing upgrades to VELCO’s existing Highgate Substation, located in Highgate, 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

October 5, 2022

Dan Poulin’s testimony introduces the other witnesses offering testimony in support of the so-called “Highgate Project,” provides an overview of the proposed Project’s scope, cost and schedule, explains how the Project addresses a subset of the § 248 criteria, and explains why the Section 248(j) procedures should apply to the Project.

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Exhibit Petitioner DP-1	Résumé of Dan Poulin
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Exhibit Petitioner DP-3	Project Cost Estimate Summary
Exhibit Petitioner DP-4	45 Day Package
Exhibit Petitioner DP-5	Town and Regional Plan Excerpts
Exhibit Petitioner DP-6	May 21, 2021 VSPC Meeting Minutes
Exhibit Petitioner DP-7	Aesthetic Report
Exhibit Petitioner DP-8	USGS Location Map

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

1 **1. Introduction**

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

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

6

7 Q2. Please describe your education and employment background.

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

16

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

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

1 the Connecticut River Valley Project; and Docket No. 8685, Case No. 18-1102-
2 PET, authorizing the installation of equipment at the Coolidge Substation to allow
3 for interconnection of the Coolidge Solar Project, Case No. 20-3506, the Irasburg
4 Project, and Case No. 21-3732, the Florence Project.

5

6 **2. Testimony Overview**

7 Q4. What is the purpose of your testimony?

8 A4. My testimony supports the Petition by VELCO for a Certificate of Public Good
9 (“CPG”) pursuant to 30 V.S.A. § 248(j) with respect to upgrading VELCO’s
10 existing substation located at 2731 Route 78, Highgate, Vermont (the “Project”).
11 My testimony: (1) introduces the other witnesses offering testimony in support of
12 the Project; (2) justifies application of the Section 248(j) procedures; (3) provides
13 an overview of the proposed Project and the proposed schedule for Project
14 completion and timing of needed CPG approvals; (4) provides a summary cost
15 estimate and the expected cost treatment; and (5) explains how the proposed Project
16 addresses a subset of the criteria under Section 248.

17

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

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

22

23

1	<u>Witness</u>	<u>Subject</u>
2	Ed McGann	Discusses the engineering and design details for the
3		substation work and addresses public health and
4		safety
5		
6	Andrew McMillan	Provides an assessment on the environmental and
7		historic sites criteria for the Project and VELCO's
8		waste disposal methods
9		
10		
11		
12	Q6.	Why has VELCO filed this Petition under subsection (j) of Section 248?
13	A6.	The Project is limited in size and scope, it raises no significant issues with respect
14		to the substantive criteria of Section 248, and VELCO believes that the public
15		interest is satisfied by the procedures authorized under Section 248(j). VELCO will
16		perform the Section 248 upgrades within previously disturbed lands, and most of
17		the work will occur within the existing substation fence other than the minor fence
18		expansion and associated driveway improvements, and the relocation of a VEC
19		pole. No Project components will require tree clearing. Temporary construction
20		impacts will impact a Class II wetland buffer, but such impacts will be limited and
21		VELCO proposes to implement best management practices to ensure no undue
22		adverse impacts. Thus, the Project does not raise a significant issue with respect to
23		the Section 248 criteria given the Project's limited scope and clear need to replace
24		the control building.
25		
26	Q7.	Please describe the existing VELCO Highgate substation, and noteworthy historical
27		events.

1 A7. VELCO's Highgate substation is connected to VELCO's 115 kV electric
2 transmission network in the Highgate area. The substation is connected to Vermont
3 Electric Cooperative's (VEC's) sub-transmission systems in the Highgate area.
4 VEC's distribution systems are fed from the sub-transmission system and in turn
5 serve VEC's customers.

6
7 VELCO purchased the 46 kV equipment in the Highgate Substation in 2003 from
8 Citizens Utility. VELCO rebuilt the 115 kV equipment in 2005 as part of the
9 Northern Loop project.

10

11 Q8. Please describe the primary deficiencies of the existing Highgate substation and
12 proposed solutions.

13 A8. VELCO developed an evaluation tool that it used to conduct a condition assessment
14 of the substation. VELCO is providing the Substation Condition Assessment
15 (Assessment), under seal as Confidential, as Confidential Exhibit Petitioner DP-2.
16 The Assessment identified the need to replace some of the equipment due primarily
17 to condition, but design standards and operating practices were also taken into
18 consideration. In general, VELCO proposes to address most of the substation
19 concerns by replacing the existing control building with a larger control building.
20 This work will require VELCO to adjust the existing driveway and expand a 90-
21 foot portion of the existing fence approximately 5 feet to the east. Below, I describe
22 the major elements of the Assessment and recommendations. Mr. McGann's

1 testimony and exhibits include further engineering and design details of the
2 proposed substation upgrades.

3
4 The Assessment revealed that the existing 24' x 61' light gauge metal control
5 building suffers from several deficiencies, which cumulatively, requires its
6 replacement. The control building's physical size does not adequately house the
7 protection and control equipment, station service, DC battery systems,
8 communication equipment, and security systems while maintaining safe working
9 clearances as further detailed in the Assessment. The existing shell provides no
10 ballistic protection and requires greater insulation. The existing roof includes no
11 fire protection and is not adequately insulated as icing at the eaves indicates heat
12 loss through the roof. The building's wall and door systems include no fire
13 protection, some doors have rust, and daylight can be seen around both door
14 systems. The exterior insulation of the building's foundation is exposed and
15 deteriorating due to UV rays. The existing battery rooms require increased working
16 space.

17
18 To address these deficiencies, VELCO proposes to construct a new building of
19 approximately 32' x 80'. VELCO would install the control building adjacent to the
20 existing control building inside the substation fence. Disposal of the existing
21 control building will be done in accordance with VELCO's disposal practices as
22 further discussed in Andy McMillan's prefiled testimony under the waste disposal
23 criterion.

1 To accommodate the new control building, VELCO will need to expand a 90-foot
2 portion of the existing fence on the fence's eastern side and relocate the existing
3 gate. VELCO proposes to expand the fence approximately 5 feet to the east with
4 the same materials as the existing fence: chain link fence that meets the National
5 Electric Safety Code (NESC) and is at least seven feet in height. The fence
6 expansion in this area will also prevent snow from falling off the control building's
7 roof and onto the fence. In addition, VEC will have to remove its existing 46 kV
8 conductors and one pole and relocate these just outside the fence on the east side of
9 the substation approximately 30 feet to allow clearance to the new control building.
10 The VEC pole and conductors to be relocated are shown on the general arrangement
11 drawing Exhibit Petitioner EJM-5.

12

13 To accommodate the new gate, VELCO will need to regrade, widen, and shorten
14 the existing driveway. The driveway details are included in Ed McGann's prefiled
15 testimony.

16

17 Q9. In summary, please describe the Project's major substation components.

18 A9. To address the noted deficiencies at the Highgate substation, VELCO proposes to
19 install/perform the following major components:

- 20 • Replace the existing 24 foot by 61-foot VELCO control building with a new,
21 approximately 32 foot by 80-foot control building that will accommodate a
22 protection and control system, station service, DC battery systems,

1 communication equipment, security systems, and bathroom. The new control
2 building will be located inside the existing the substation.

3 • Expand a 90-foot portion of fence on the fence's eastern side to accommodate
4 the new control building. VELCO proposes to expand the fence approximately
5 5 feet to the east.

6 • Relocate the entry gate approximately 40 feet to the south, and adjust the
7 existing driveway by regrading, widening, and shortening the driveway to
8 accommodate the new entry gate.

9 • Relocate VEC's existing 46 kV wires and pole just outside the east side of the
10 fence to accommodate the new control building.

11 • Relocate existing communication fiber cables to connect to the new control
12 building.

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

15

16 Q10. Does the Project require VELCO to remove any trees?

17 A10. No.

18

19 Q11. Will the Project require any blasting?

20 A11. No.

21

1 Q12. Please describe the approach for developing the Project's cost estimate.

2 A12. The first step was to identify the resources required to plan, design, and construct
3 the Project. VELCO developed the cost estimate utilizing seven categories to
4 establish the total cost for each Project element. The seven resource categories are
5 as follows:

- 6 • Material
- 7 • Labor
- 8 • Equipment
- 9 • Indirects
- 10 • Escalation
- 11 • Capital Interest
- 12 • Contingency

13

14 Q13. Please summarize the process used to develop the direct and indirect costs.

15 A13. VELCO developed the Direct Costs using cost data from projects VELCO recently
16 completed or which are in progress. Specifically, VELCO used cost data associated
17 with recent VELCO substation and line projects to develop the material, labor and
18 equipment costs. VELCO utilized vendor cost data for portions of the Project scope
19 for which VELCO did not have recent actual cost data from its prior projects.

20

21 VELCO estimated labor and equipment costs using preliminary detailed designs.

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

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

3

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

6

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

15

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

20

21 VELCO Project Controls developed escalation costs by using an anticipated 2022-
22 2025 spending plan and projected Handy-Whitman cost index and consumer price
23 index (CPI).

1

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

6

7 Finally, the Project cost estimate also accounts for a contingency of twenty percent
8 (20%) due to the preliminary detailed designs and the uncertainty and risk
9 associated with the Project level of definition.

10

11 Q14. What is the total cost estimate for the VELCO Components based on the various
12 cost elements and resource categories described?

13 A14. The total cost of the Project is estimated at \$12,513,480. The total cost estimate is
14 comprised of \$6,030,067 of Direct Costs (encompassing Material, Labor and
15 Equipment), \$3,499,335 of Indirect Costs, \$716,339 in Escalation, \$246,602 in
16 Capital Interest, and \$2,021,139 in Contingency. Please refer to Exhibit Petitioner
17 DP-3 for a cost summary by resource category and Project elements.

18

1 Q15. What is the design basis for the substation's Direct cost estimate?

2 A15. The Direct cost estimate is based on the General Arrangement Plans and the One-
3 Line Diagram as presented in Mr. McGann's testimony and exhibits.

4

5 Q16. What risk elements did VELCO consider when developing the cost estimate and
6 how were the risks addressed in the cost estimate?

7 A16. Risk elements considered are the Project duration, level of certainty regarding
8 ground condition for below grade work, required aesthetic and environmental
9 mitigation measures, volatility regarding escalation rates, temporary configurations
10 necessary to support construction, global supply chain issues and potential resource
11 constraints at the anticipated time of construction. Per standard project
12 management practices widely recognized by organizations such as the Project
13 Management Institute, VELCO applied contingency to the estimate to account for
14 these risks.

15

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

18

19 Q17. Are any portions of the Project upgrades expected to be eligible for Pool
20 Transmission Facilities ("PTF") regionalized cost recovery?

21 A17. Yes. It is estimated that \$594,324 of the total Project costs will be eligible for PTF
22 recovery. The existing substation contains PTF, non-PTF and general plant

1 facilities. The total Project costs are allocated among these classifications on a
2 percentage basis. Please see Exhibit Petitioner DP-3 for the breakdown.

3

4 Q18. What is the Project schedule?

5 A18. We propose to begin Project construction as soon as possible after receiving the
6 required permits and approvals. Currently, the estimated construction schedule is
7 from April 2023 with a targeted completion date of March 2024. This assumes
8 receipt of a CPG by the end of March 2023. A failure to achieve this schedule will
9 likely have adverse impacts on Project execution and overall Project cost.

10

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

20

21 VELCO also requests permission to commence construction without having first
22 obtained the required Wastewater System and Potable Water Supply Permit and the
23 Division of Fire Safety Permit. VELCO seeks exemption from the standard

1 condition that requires acquisition of all state and federal permits prior to the start
2 of construction. Although VELCO anticipates the receipt of the Wastewater
3 System and Potable Water Supply Permit and Division of Fire Safety Permit prior
4 to the start of construction, the acquisition of these two permits may not occur prior
5 to when VELCO is prepared to begin site preparation and construction activities
6 that are not subject to these two permits. Specifically, VELCO would like to begin
7 the following activities upon receipt of a final order and CPG: equipment
8 demolition, site excavation, reroute of fiber-optic cable and installation of
9 temporary equipment.

10

11 **3. Criteria on Public Outreach [Docket No. 7081]**

12 Q19. Has the Project development conformed to the transmission planning requirements
13 approved in the Memorandum of Understanding (MOU) of Docket No. 7081?

14 A19. Yes.

15

16 Q20. Please describe VELCO's public outreach efforts related to this Project.

17 A20. VELCO designed the public outreach efforts to meet the requirements of the MOU
18 from Docket No. 7081. VELCO specifically reached out to the local community
19 in Highgate. Once the Project's need and site details were further refined, VELCO
20 issued a 45-day advance notice describing the Project to the abutting landowners,
21 the Town of Highgate Select Board, the Town of Highgate Planning Commission,
22 the Northwest Regional Planning Commission, Department of Public Service,
23 Agency of Natural Resources (ANR), and Vermont Division of Historic

1 Preservation. VELCO Project staff met with the Town of Highgate Select Board.
2 There were no comments or concerns raised in these meetings that VELCO had not
3 already planned to address as part of the Project’s construction. VELCO invited all
4 stakeholders to a public meeting to provide interaction for questions and feedback.
5 The public meeting was scheduled for the convenience of interested persons and no
6 members of the public commented. The public has been offered other means of
7 communicating with VELCO including phone and email transmittals. The VELCO
8 website also provides constant availability for those with internet access to Project
9 information and provides a means of submitting requests for information via an on-
10 line contact form. Please see Exhibit Petitioner DP-4 (45-day Package).

11

12 Q21. Did VELCO receive comments from the 45-day notice?

13 A21. No.

14

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

16 Q22. Will the Project unduly interfere with the orderly development of the region?

17 A22. No. The Project will have a favorable impact on the orderly development of the
18 region in that it will improve the reliability of the region’s existing electrical supply
19 while not adversely impacting the environment or aesthetics. The proposed Project
20 is consistent with the 2015-2022 Highgate Town Plan (“Town Plan”). The Town
21 Plan contains no language addressing the construction or operation of substations
22 for reliability purposes. The Town Plan Land Use map identifies the Project area
23 as “Industrial Commercial” and explains that “Commercial and industrial

1 development is primarily located along VT 78 and within the village areas.”
2 Exhibit Petitioner DP-5 (pages 83, 86-87, and map 9.3 at 95). The Project complies
3 with the Town Plan.

4
5 VELCO also examined the Northwest Regional Commission Plan, effective
6 September 2, 2015 with a June 28, 2017 Energy Plan Amendment (“RPC
7 Plan”). The RPC Plan does not provide land conservation measures regarding the
8 Project parcel where VELCO seeks to install the upgrades. Further, the RPC Plan
9 contains no siting requirements for electric substations that are not part of a
10 generation facility. The RPC Plan identifies the Highgate Substation on land use
11 maps. Exhibit Petitioner DP-5 (Appendix C of Energy Plan). Because the RPC
12 Plan does not contain any applicable land conservation measures, the Project is
13 consistent with the RPC Plan.

14
15 **5. Need for Present and Future Demand for Service [30 V.S.A. § 248(b)(2)]**

16 Q23. Is the Project required to meet the need for present and future demand for service
17 which could not otherwise be provided in a more cost-effective manner through
18 energy conservation programs and measures and energy efficiency and load
19 management?

20 A23. Yes. The VELCO Highgate substation’s condition as discussed above is the main
21 driver of the need for the proposed Project. Energy efficiency and load
22 management actions could not resolve these problems.

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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-6 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.

Q24. Could the same benefits be achieved by transmission alternatives?

A24. 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.

Q25. Has VELCO considered and assessed whether the proposed Project represents the least-cost alternative to resolving the deficiencies discussed above?

A25. 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.

1 **6. System Stability and Reliability [30 V.S.A. § 248(b)(3)]**

2 Q26. What impact will this upgrade have on system stability and reliability?

3 A26. The Project will have no adverse impact on the stability and reliability of
4 VELCO’s transmission system. In fact, the Project will improve system safety
5 and reliability by replacing equipment of less than adequate condition.

6

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

8 Q27. Will the Project result in an economic benefit to the State?

9 A27. Yes. The Project will create economic and safety benefits to the citizens of
10 Vermont. The Project will increase property tax revenues based on the capital
11 investment required for the upgrades. Additionally, there will be some local
12 economic benefits associated with engaging local businesses and contractors during
13 the Project’s construction phase.

14

15 **8. Public Health and Safety [30 V.S.A. § 248(b)(5)]**

16 Q28. Will the Project have any adverse effects on the health, safety, or welfare of the
17 public or adjoining landowners?

18 A28. No. VELCO will design and construct the Project in accordance with National
19 Electric Safety Code requirements. The Company will adhere to prudent utility
20 construction practices throughout the construction phase, and the Project will not
21 endanger the public or adjoining landowners. VELCO will operate and maintain
22 the substation equipment installed as part of this Project in the same safe manner
23 that the Company operates and maintains all of its facilities.

1 **9. Transportation Systems/Traffic [10 V.S.A. § 6086(a)(5)]**

2 Q29. Please describe the Project's potential impacts with respect to use of public roads.

3 A29. The Project poses no long-term traffic impacts in the Town of Highgate. VELCO
4 anticipates only minor, short duration traffic impacts, if any, due to deliveries of
5 equipment and material to the substation site during the construction period
6 (expected to be from March 2023 to December 2024). Such deliveries will use
7 existing roads with vehicles that are commonly used on public roads. During
8 delivery of any large equipment, VELCO will employ the services of traffic control
9 personnel to manage traffic flow. VELCO will obtain all required highway permits
10 associated with the work and deliveries.

11

12 Q30. Will the Project affect railway transportation?

13 A30. No. VELCO does not anticipate that the Project will impact railway transportation.

14

15 Q31. Where will VELCO store equipment during construction?

16 A31. VELCO will use the existing substation parcel, VELCO right-of-way easements,
17 and a VELCO-owned parcel across Route 78 from the substation to store any
18 material needed during construction. VELCO currently uses the parcel across
19 Route 78 to maintain its existing transmission lines. VELCO will need to install a
20 temporary entrance way from its existing private paved Highgate Converter Access
21 Road to this parcel that will consist of landscape fabric and stone. VELCO will
22 remove this temporary entrance way after Project construction. These construction
23 support areas are within the Project area that VELCO studied for impacts to the

1 environmental and historic sites criteria. Please see Exhibit Petitioner EJM-5 for
2 the location of these areas.

3

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

5 Q32. What impact will the Project have on educational and municipal services?

6 A32. The Project will not have any impact on educational or municipal services. With
7 respect to educational services, the Project will not add any new students to the
8 affected municipality. Thus, the Project will not place an unreasonable burden on
9 the ability of a municipality to provide educational services because the Project will
10 not require or affect educational services.

11

12 With respect to municipal services, the Project does not require any fire or police
13 services beyond those typically required of other businesses, and what is currently
14 required for the Highgate substation. Andrew McMillan's prefiled testimony
15 discusses VELCO's plans regarding limited disposal of sanitary waste.

16

17 **11. Aesthetics [30 V.S.A. § 248(b)(5), 10 V.S.A. § 6086(a)(8) & PUC Rule 5.800]**

18 Q33. Will the Project adversely impact aesthetics?

19

20 Q33. No. VELCO retained T.J. Boyle & Associates (Boyle) to prepare an aesthetic
21 report for the Project, which is attached as Exhibit Petitioner DP-7. The Boyle
22 report concludes that the Project will not have an adverse effect on the scenic or
23 natural beauty or aesthetics of the area. The Boyle report explains that:

1 (1) The Project will have extremely limited visibility from the surrounding
2 area. Views are substantially screened by surrounding evergreen vegetation and
3 landform.

4 (2) The Project’s colors and materials are considered compatible with the
5 existing conditions at and within the vicinity of the Project site. Any visibility of
6 the proposed improvements will be seen within the context of the existing
7 substation and other nearby electrical transmission infrastructure.

8 (3) For visibility of the Project that would be possible, upgrades represent a
9 minor incremental change to infrastructure within the substation and will not
10 result in a material change to the visual character of the substation or from the
11 surrounding area.

12 For these reasons and the additional details in the Boyle report, the second part of
13 the Quechee Analysis was not administered, the Project will not have an undue
14 adverse aesthetic impact, and the Project does not require aesthetic mitigation
15 measures under PUC Rule 5.800. Exhibit Petitioner DP-7.

16
17 **12. Development Affecting Public Investments [10 V.S.A. § 6086(a)(9)(K)]**

18 Q34. What impact will the Project have on public investment in a public resource?

19 A34. The Project will not unnecessarily or unreasonably endanger any public or quasi-
20 public investment in any facility, service, or lands, or materially jeopardize or
21 interfere with the function, efficiency, or safety of, or the public’s use or enjoyment
22 of or access to any facility, service, or lands.

23

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

2 Q35. Is the Project consistent with VELCO’s least cost Integrated Resource Plan?

3 A35. VELCO does not have an integrated resource plan. As a transmission-only
4 company, VELCO periodically produces transmission studies. Specifically,
5 VELCO issued a 2021 Vermont Long-Range Transmission Plan. The 2021 Plan
6 explains that:

7 The transmission plan requirements are not meant to include those
8 asset condition or routine projects that are undertaken to maintain
9 existing infrastructure in acceptable working condition. Some-times
10 these activities require significant projects, such as the
11 refurbishment of substation equipment and the replacement of a
12 relatively large number of transmission structures to replace aging
13 equipment or maintain acceptable ground clearances. Although the
14 plan requirements do not apply to these types of projects, VELCO
15 is listing these projects for the sake of information. These projects
16 are needed to maintain the existing system, not to address system
17 issues resulting from load growth, and VELCO routinely shares
18 plans for many of these projects with the VSPC as part of its non-
19 transmission alternatives (NTA) project screening process. The
20 formal NTA screening tool employed in this process “screens out”
21 projects that are deemed “impracticable” for non-transmission
22 alternatives because they are specifically focused on resolving asset
23 condition concerns.

24
25
26 2021 VELCO Plan, at page 10. Section 4.4.1 of the 2021 plan acknowledges that
27 VELCO has assessed the Highgate substation and “it has been determined that
28 refurbishments are necessary.”

29

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

2 Q36. Is the Project consistent with the 2022 Comprehensive Energy Plan?

3 A36. Yes. Vermont’s Comprehensive Energy Plan identifies objectives that utilities
4 must meet in serving the public interest, such as serving its customers at the lowest
5 life-cycle costs, including environmental and economic costs, and reducing
6 greenhouse gas emissions. The CEP “balances the principles articulated in 30
7 V.S.A. § 202a of energy adequacy, reliability, security, and affordability, which are
8 all essential for a vibrant, resilient, and robust economy and for the health and well-
9 being of all Vermonters.” CEP executive summary at 1. The CEP also
10 acknowledges that the “grid needs to continue to perform — to reliably deliver the
11 required energy to customers, every hour of the year, to and from resources that are
12 exponentially more distributed, diverse, and variable, under increasing pressure
13 from severe weather events and cyberattacks, while weaning off fossil resources
14 and staying affordable.” CEP at ES-24. The CEP states that Vermont’s
15 overarching goal for the grid should be “A secure and affordable grid that can
16 efficiently integrate, use, and optimize high penetrations of distributed energy
17 resources to enhance resilience and reduce greenhouse gas emissions.” CEP at page
18 60. The Project strikes the proper balance between these objectives. Specifically,
19 VELCO has proposed a Project that restores and maintains system reliability and
20 safety. Moreover, VELCO’s proposal to perform the Highgate Project in an area
21 that already hosts other electric infrastructure limits the environmental impact.
22 VELCO’s analysis above demonstrates that the Project is the least-cost option.

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

3
4 **15. Impact on Vermont Utilities and Customers [30 V.S.A. §248(b)(10)]**

5 Q37. Can existing or planned transmission facilities serve the Project without creating an
6 undue adverse effect on Vermont utilities, customers, or existing transmission
7 facilities?

8 A37. Yes. Existing transmission facilities can serve the Project without creating an
9 undue adverse effect on Vermont utilities and customers. The proposed Project is
10 designed to enhance the existing utility system and to improve service to customers.
11 VELCO has, and will continue to coordinate the work with VEC to minimize
12 impacts during construction and ensure worker safety.

13

14 **16. Conclusion**

15 Q38. Does this conclude your testimony at this time?

16 A38. Yes, it does.