

**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 Florence Substation, located in Pittsford, Vermont

**PREFILED TESTIMONY OF JACOB REED  
ON BEHALF OF VERMONT ELECTRIC POWER COMPANY, INC.  
*This testimony and associated exhibits have been filed ePUC***

September 3, 2021

Jacob Reed’s testimony presents the report entitled: “Florence Project Natural Resource Assessment Report” prepared by TRC, which addresses VELCO’s proposal to upgrade VELCO’s existing substation located at 8040 Whipple Hollow Road, Pittsford, Vermont (the “Project”). Mr. Reed also addresses the specific environmental and historic sites criteria under 30 V.S.A. § 248(b)(5).

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## **EXHIBITS**

<b>Exhibit Petitioner JR -1</b>	<b>Résumé of Jacob Reed</b>
<b>Exhibit Petitioner JR -2</b>	<b>Florence Historic Sites Memo</b>
<b>Exhibit Petitioner JR -3</b>	<b>Natural Resource Assessment Report – Substation Condition Assessment Project Florence Substation</b>
<b>Exhibit Petitioner JR -4</b>	<b>Non-Native Invasive Species Monitoring and Control Plan</b>
<b>Exhibit Petitioner JR -5</b>	<b>VELCO’s Environmental Guidance Manual (this document has been provided ePUC only)</b>
<b>Exhibit Petitioner JR -6</b>	<b>SF6 Policy</b>
<b>Exhibit Petitioner JR -7</b>	<b>VELCO’s Environmental Management Plan for Decommissioning and Reclamation of Electrical Facilities</b>

PREFILED TESTIMONY OF JACOB REED  
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 Jacob Reed. I am the Vermont Electric Power Company, Inc.  
4           (“VELCO”) Environmental Specialist leading environmental permitting for the  
5           Florence Project. My business address is Vermont Electric Power Company, Inc.,  
6           366 Pinnacle Ridge Road, Rutland, VT 05701.

7  
8    Q2.    Please describe your education and employment background.

9    A2.    I received a Bachelor of Science degree in Architectural Engineering Technology  
10           from Vermont Technical College, and a Master’s of Science in Environmental  
11           Studies and Sustainability from Unity College. I started working for VELCO as an  
12           intern in 2007 and have been employed full-time by VELCO since November 2012.  
13           I have worked on a variety of environmental projects at VELCO. In my current  
14           role as Environmental Permitting Lead for the Florence Project, I am responsible  
15           for scheduling and managing any necessary natural resource and above- and below-  
16           ground historic site assessments; agency coordination and correspondence,  
17           environmental permitting, and construction and restoration oversight to ensure  
18           compliance with the Project’s environmental permits and commitments. Enclosed  
19           as Exhibit Petitioner JR-1 is my resume, which sets forth my educational and  
20           professional experience in more detail.

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

3 A3. Yes. I offered testimony at the PUC in support of VELCO’s New Haven  
4 Operations Facility in Case 19-4582-PET, and VELCO’s East Avenue and Queen  
5 City Substation Improvement Project in Case 18-5029-PET. I have also led several  
6 permitting efforts for VELCO and supported other VELCO staff in the  
7 development of their prefiled testimony and exhibits for other projects brought  
8 before the PUC, including several associated with the Statewide Radio Project.  
9 And I have prepared several Act 250 land use permit applications for VELCO that  
10 includes addressing the criteria contained in 10 V.S.A. Section 6086.

11

12 Q4. Do you hold any professional licenses or certifications?

13 A4. Yes. I am a Certified Professional in Erosion and Sediment Control (CPESC  
14 #7669). I also hold OSHA 40-hour certification for Hazardous Waste Operations  
15 and Emergency Response (HAZWOPER) (29 CFR 1910.120).

16

17 **2. Testimony Overview**

18 Q5. What is the purpose of your testimony?

19 A5. My testimony summarizes how the Project will comply with the environmental and  
20 historic sites criteria applicable to electric transmission projects under 30 V.S.A. §  
21 248. As such, my testimony provides an assessment of potential impacts upon  
22 above and below ground historic sites as well as presenting the report entitled:

1 “Florence Project Natural Resource Assessment Report,” prepared by TRC, which  
2 addresses VELCO’s proposal to upgrade its existing substation located at 8040  
3 Whipple Hollow Road, Pittsford, Vermont (the “Project”). The Assessment Area  
4 (as defined below) encompasses the proposed Florence Substation, and areas  
5 VELCO may use for construction staging for the Project. Specifically, my  
6 testimony addresses the following statutory criteria: outstanding resource waters  
7 (10 V.S.A. § 1424a(d)), air pollution (10 V.S.A. § 6086(a)(1)), headwaters, (10  
8 V.S.A. § 6086(a)(1)(A)), waste disposal (10 V.S.A. § 6086(a)(1)(B)), water  
9 conservation (10 V.S.A. § 6086(a)(1)(C)), floodways (10 V.S.A. § 6086(a)(1)(D)),  
10 shorelines (10 V.S.A. § 6086 (a)(1)(F)), streams (10 V.S.A. § 6086(a)(1)(E)),  
11 wetlands (10 V.S.A. § 6086(a)(1)(G)), water supply (10 V.S.A. § 6086(a)(2) and  
12 (3)), soil erosion (10 V.S.A. § 6086 (a)(4)), and threatened and endangered species,  
13 rare and irreplaceable natural areas and necessary wildlife habitat (10 V.S.A. §  
14 6086(a)(8)). My testimony also addresses additional criteria under 30 V.S.A. §  
15 248(b)(5): historic sites, greenhouse gas impacts, use of natural resources, and  
16 primary agricultural soils.

17 **3. Historic Sites [30 V.S.A. § 248(b)(5)]**

18 Q6. Will this Project have an undue adverse effect on historic sites?

19 A6. No. A “historic site” is a site that has been officially included in the National  
20 Register of Historic Places and/or the state register of historic places. There are no  
21 registered historic sites within or adjacent to the Project. In addition, VELCO

1 retained WSP USA Inc. (WSP) (formerly Louis Berger Group) to perform an  
2 Archaeological Resource Assessment (ARA) and follow-up Phase 1B Archaeology  
3 Survey, as well as a Historical Architectural Resource Investigation to determine the  
4 proposed Project area's sensitivity for archaeological and historic resources. WSP  
5 concluded that the Project will have no impact on below or above ground historic  
6 sites. One below ground Site (VT-RU-685) was identified just north of the area of  
7 potential effect (APE) on the Florence Substation property as part of a separate  
8 assessment effort. The site is considered not significant and not eligible for listing  
9 on the National Register of Historic Places. WSP found most of the APE to consist  
10 of very steep slope, saturated wetland soils or areas largely disturbed from the  
11 construction of the substation and associated access road and thereby not sensitive.  
12 Furthermore, none of the above-ground properties within the 0.25-mile radius of the  
13 Project were found to be eligible for listing in the State Register of Historic Places.  
14 WSP has provided the reports to the Vermont Division for Historic Preservation  
15 (DHP). Therefore, the Project will not have an undue, adverse effect on historic  
16 sites. Exhibit Petitioner JR-2 (Florence Historic Sites Memo).

17

18 **4. Natural Environment [30 V.S.A. § 248(b)(5)]**

19 Q7. Will the proposed Project have an undue adverse effect on the applicable Section  
20 248 environmental criteria?

21 A7. No. VELCO retained TRC to perform detailed natural resource assessments within  
22 the area of the proposed Project, referred to as the "Substation Assessment Area"

1 or “Assessment Area.” In addition to the proposed substation, the TRC Assessment  
2 Area also included the proposed transmission line work areas and access, and  
3 potential staging areas that VELCO would use to support Project construction  
4 within the Assessment Area. Exhibit Petitioner JR-3 (Florence Project Natural  
5 Resource Assessment Report). The assessments included a portion of the existing,  
6 maintained overhead utility line corridor and switching structure west of the  
7 existing Florence substation. VELCO has considered the surrounding natural  
8 resources in the siting and design of the proposed Project, and has reduced impacts  
9 to the greatest extent possible. VELCO’s approach to avoidance, minimization,  
10 and mitigation of potential impacts to specific Section 248 criteria are discussed  
11 individually below. Generally, VELCO has limited the vegetation clearing  
12 necessary for the Project to two areas; west of the proposed substation to  
13 accommodate the new transmission lines, and the area to the northeast of the  
14 existing substation to accommodate the proposed substation footprint and the  
15 associated ledge/rock removal. These locations are shown in the vegetation  
16 clearing plans within Exhibit Petitioner DP-3. The proposed work will require  
17 VELCO to install a new transmission line and associated structures to the west of  
18 the substation. All other adjacent overhead utility and transmission line work  
19 occurs within the existing maintained VELCO and GMP corridors, do not involve  
20 any corridor expansion, and will include limited earth disturbance and temporary  
21 wetland matting necessary to establish safe work pads and access for transmission  
22 line equipment.

1 VELCO will also follow the site-specific Non-native and Invasive Species (NNIS)  
2 Monitoring and Control Plan, which is included as Exhibit Petitioner JR-4. In  
3 addition, VELCO will perform all Project work in accordance with the VELCO  
4 Environmental Guidance Manual (VEGM) (Exhibit Petitioner JR-5). As such, the  
5 Project will not result in any undue, adverse effects on the natural environment.  
6

7 **5. Outstanding Resource Waters [10 V.S.A. § 1424a(d) & 30 V.S.A. § 248(b)(8)]**

8 Q8. Will the Project result in an undue adverse effect on any Outstanding Resource  
9 Waters?

10 A8. No. There are no Outstanding Resource Waters within or in the vicinity of the  
11 Project area. Therefore, the proposed Project will have no undue, adverse effect on  
12 Outstanding Resource Waters. Exhibit Petitioner JR-3, section 2.  
13

14 **6. Water and Air Pollution [10 V.S.A. § 6086(a)(1)]**

15 Q9. Will the Project result in an undue adverse effect on air quality?

16 A9. No. Work during the Project's construction phase will result in minor air emissions.  
17 There will be vehicle emissions at the sites from the use of diesel and gasoline  
18 powered vehicles and equipment. There may also be brief releases of dust  
19 generated during equipment and material transport, earthmoving, blasting, rock  
20 crushing and other general construction activities; however, VELCO will manage  
21 dust resulting from construction activities in accordance with the Vermont

1 Standards and Specification for Erosion Prevention and Sediment Control,  
2 Construction Stormwater Permit, project-specific EPSC Plan and the VEGM.  
3 Furthermore, Project operation, upon completion of the construction phase, will not  
4 produce any regulated air emissions. Therefore, the Project will not have an undue,  
5 adverse effect on air quality. Exhibit Petitioner JR-3, section 3.

6

7 Q10. Will the Project result in undue adverse water quality conditions?

8 A10. No. The proposed Project activities will involve more than one acre of earth  
9 disturbance; therefore, the Project will require and VELCO will obtain a Vermont  
10 Department of Environmental Conservation (VT DEC) Construction Stormwater  
11 Discharge Permit. VELCO will perform all earth disturbing activities in accordance  
12 with the Construction Stormwater Discharge Permit, Project-specific EPSC Plan,  
13 the Vermont Standards and Specifications for Erosion Prevention and Sediment  
14 Control (EPSC), and the VEGM.

15

16 The Florence substation is included in VELCO's *Spill Prevention, Control, and*  
17 *Countermeasure (SPCC) Plan*, which addresses the operational oil-filled  
18 equipment at the substation to prevent a discharge of oil into navigable waters.  
19 VELCO will adhere to its SPCC Plan, which includes site-specific drainage  
20 pathways and detailed information on spill response measures to ensure protection  
21 of waters adjacent to the substation in the event of a release of oil or hazardous  
22 material to the environment. Implementation and adherence to the EPSC Plan,

1 VEGM, SPCC Plan, and environmental compliance oversight inspections will  
2 ensure the protection of water quality.

3  
4 If a release of a hazardous material were to occur during the Project's construction  
5 phase, VELCO would take appropriate steps to contain it; report the release to the  
6 VT DEC (as necessary); remove the contaminated material from the site for proper  
7 disposal; and restore the area in accordance with the VEGM (Exhibit Petitioner JR-  
8 5) and applicable State and Federal Regulations. Obtaining and complying with  
9 the Construction Stormwater Discharge Permit, the VEGM and applicable  
10 regulations will maintain existing water quality at the Project site. As such, there  
11 will be no undue adverse effect to water quality. Exhibit Petitioner JR-5.

12

13 **7. Headwaters [10 V.S.A. § 6086(a)(1)(A)]**

14 Q11. Will the Project result in undue adverse effects to headwaters?

15 A11. No. In order for the headwaters criteria to be met, the Project must demonstrate  
16 compliance with any applicable health and environmental regulations regarding the  
17 reduction of the quality of the ground or surface waters flowing through or upon  
18 lands which are not devoted to intensive development. These areas are defined as:  
19 1) headwaters or watersheds characterized by steep slopes and shallow soils; 2)  
20 drainage areas of 20 square miles or less; 3) above 1,500 feet elevation; 4)  
21 watersheds of public water supplies designated by the Vermont ANR; or 5) areas  
22 supplying significant amounts of recharge waters to aquifers. TRC analyzed

1 available information and conducted field surveys to determine if the Project will  
2 impact any lands that meet the criteria of 10 V.S.A. § 6086(a)(1)(A). Exhibit  
3 Petitioner JR-3, section 4.

4  
5 TRC found the Assessment Area is: (a) not characterized by steep slopes and  
6 shallow soils, (b) not positioned above 1,500 feet, (c) not a watershed designated  
7 by ANR as a public water supply, and (d) not an area supplying significant amounts  
8 of recharge water to aquifers. The Assessment Area is within the subwatershed  
9 (Hydraulic Unit 12 (HU12) - Subbasin) headwaters of Bresee Mill Brook-Otter  
10 Creek, which has a total subwatershed area of 34.99 square miles (greater than 20  
11 square miles). It is also located within the Greater Lake Champlain Drainage Basin.

12  
13 The Project will not create an undue adverse impact on the headwater criterion.  
14 The potential effects of the Project on ground and surface water quality will be  
15 minimal. With the implementation of the practices and standards contained within  
16 the VEGM, a Project-specific EPSC Plan, and the site-specific SPCC Plan, the  
17 Project will have minimal potential to adversely affect the natural flow regime,  
18 groundwater recharge, the condition or water quality of streams, groundwater, and  
19 wetlands, or public health. The Project will meet any applicable Health and  
20 Environmental Conservation Department regulations regarding the reduction of the  
21 quality of the ground or surface waters flowing through or upon lands. Therefore,  
22 the Project will not result in undue adverse effects to headwaters.

1   **8.    Waste Disposal [10 V.S.A. § 6086(a)(1)(B)]**

2    Q12. Please discuss VELCO's plans regarding waste disposal.

3    A12. VELCO will handle and dispose of the decommissioned substation and overhead  
4       utility line materials, construction debris, and waste generated because of this  
5       Project in compliance with State of Vermont Solid Waste Management Rules, and  
6       VELCO's Environmental Management Plan for Decommissioning and  
7       Reclamation of Electrical Facilities (Decommissioning Plan) included in Exhibit  
8       Petitioner JR-7. Metal equipment such as structural steel, chain link fence,  
9       disconnect switches and the control building will be recycled as scrap metal.  
10      VELCO will extract the SF6 gas and containerize it into compressed gas cylinders  
11      for inventory quantification and recycling purposes. VELCO will dispose of  
12      porcelain insulators as solid waste in an onsite dumpster for transport to a solid  
13      waste landfill. The protection and control (P&C) systems generally consist of  
14      microprocessor, solid state, or electric mechanical relays, which constitute  
15      recyclable metal and/or e-waste. VELCO will take the wire and cables (copper and  
16      aluminum) and metal enclosures to a scrap metal facility for recycling. VELCO  
17      will properly dispose of any replaced or decommissioned relays according to their  
18      material makeup in accordance with the applicable waste disposal rules and  
19      regulations. Smaller oil-filled equipment, such as instrument voltage transformers  
20      and bushings, will be handled and disposed of by a licensed commercial entity,  
21      whereby the oil is tested and recycled according to federal regulations and metal is  
22      recycled as scrap metal. Oil circuit breakers are tested for polychlorinated

1 biphenyls (PCBs) and the oil is recycled accordingly at an approved facility.  
2 VELCO will then transport the metal tank and frame to a scrap metal facility for  
3 recycling.

4  
5 As the proposed Project includes the replacement of the existing VELCO control  
6 building at the substation, VELCO performed an asbestos and lead-based paint  
7 survey of its control building to determine the presence/absence of these hazardous  
8 building materials and the associated disposal requirements. The survey and  
9 associated laboratory results indicated that the building does not contain lead-based  
10 paint and that decommissioned materials from the building can be disposed of as  
11 general construction and demolition debris. The building does, however, contain  
12 asbestos containing materials (ACMs), which will be disposed of properly by a  
13 licensed professional as part of the building demolition. Any additional ACM not  
14 previously identified due to inaccessibility during equipment operations at the time  
15 of sampling will also be properly handled and disposed of during decommissioning  
16 of the building. VELCO will design, permit and conduct the removal of ACMs in  
17 accordance with the applicable Vermont Department of Health and Environmental  
18 Protection Agency rules and regulations.

19  
20 VELCO will dispose of sanitary waste during construction by obtaining and using  
21 portable toilet/s and with the onsite septic system. Currently, the Florence  
22 Substation has a drilled well and on-site septic. VELCO is still in the siting and

1 design phase of its proposed onsite water supply and wastewater system. As part  
2 of this effort, VELCO will evaluate the viability of utilizing the existing well and  
3 septic system for the new control building. VELCO will obtain the necessary  
4 Wastewater and Potable Water Supply Permit from the VT DEC Drinking Water  
5 and Groundwater Protection Division for the Project. VELCO will design and  
6 construct its wastewater system and associated connections for the new control  
7 building in accordance with its VT DEC permit and the *Wastewater System and*  
8 *Potable Water Supply Rules* administered by the VT DEC.

9

10 The Project requires VELCO to remove woody vegetation in areas surrounding the  
11 existing substation footprint to complete the proposed Project activities. VELCO  
12 will either chip the woody debris onsite or transport the material offsite for disposal.

13

14 VELCO will stockpile and dispose of clean wood products that are brought onsite  
15 during Project construction as part of equipment and/or material deliveries (i.e.  
16 pallets) in accordance with Act 148, the Universal Recycling and Composting Law.

17 VELCO will perform utility pole removal and replacement activities in accordance  
18 with the Penta BMP identified in Docket 8310.

19

20 The implementation and adherence to the items listed above will ensure that proper  
21 waste disposal practices are performed during Project construction and operation.

22

1 In consultation with the Vermont DEC Waste Management and Prevention  
2 Division (WMPD), VELCO evaluated the substation soils and concrete to  
3 determine the potential for contaminants and, as a result of site assessments,  
4 determined that non-PCB mineral oil contamination is present in two locations  
5 beneath oil-filled operational equipment. VELCO will remediate the non-PCB  
6 mineral oil impacted soil by excavating and disposing of it at an appropriate facility,  
7 such as a solid waste landfill.

8  
9 The Project does not require an operational stormwater permit because the limited  
10 expansion of total resulting impervious area associated with the Project is less than  
11 one acre.

12  
13 As part of the proposed Florence substation upgrades, VELCO will install a passive  
14 secondary containment system for the single transformer that is proposed. VELCO  
15 is still in the process of refining its Project-specific containment system, which is  
16 further described in Mr. Ed McGann's testimony. The passive secondary  
17 containment system will align with VELCO's design objectives by providing  
18 containment for 110% of the volume from the largest piece of oil containing  
19 equipment plus the amount of precipitation from a 25-year, 24-hour storm event.  
20 The secondary containment system's outfall pipe discharges rainwater and  
21 snowmelt under normal operating conditions. The outfall pipe location is driven by  
22 site topography, and the invert elevation of the sump and catchment. VELCO is

1 striving to minimize impacts to the nearby class II wetland and associated buffer  
2 with its outfall pipe location; however due to site specific constraints, impacts will  
3 be unavoidable. VELCO proposes to locate the passive secondary containment  
4 system outfall pipe west of the proposed substation within the adjacent Class II  
5 wetland, as that low portion of the property affords gravity fed drainage. This  
6 containment outfall location will be sufficiently stabilized to prevent erosion in the  
7 wetland resource and installed in accordance with the Vermont Standards and  
8 Specifications for Erosion and Sediment Control and the Project's Construction  
9 Stormwater Discharge permit. Impacts associated with the drainage pipe outfall  
10 will be incorporated in the necessary wetland impact calculations and permitted  
11 accordingly. The proposed passive secondary containment system is more fully  
12 described in Mr. Ed McGann's testimony and the above-mentioned pipe outfall's  
13 location is shown on Exhibit Petitioner EJM-5. The proposed Project will improve  
14 the overall quality of the site with regard to waste disposal; specifically, as it  
15 pertains to the proposed passive secondary oil containment system and the  
16 remediation of ACM within the control building. VELCO will update the Florence  
17 substation section of its system-wide SPCC Plan, as applicable. Therefore, the  
18 Project will not have an undue, adverse effect on waste disposal. Exhibit Petitioner  
19 JR-3, section 5.

20

21

22

1    **9.    Water Conservation & Supply [10 V.S.A. § 6086(a)(1)(C) & (a)(2)&(3)]**

2    Q13. Please describe water conservation measures associated with the Project.

3    A13. The Project will, where technically and economically feasible, incorporate  
4       measures to conserve water use, recycle water, and maintain the efficient operation  
5       of any such measures. VELCO will incorporate water conservation measures, such  
6       as low-flow toilets and other fixtures at the Project site, where practically feasible.  
7       There is the potential that the Project will need water for dust control, containment  
8       testing, and to help establish onsite vegetation (i.e., for restoration and/or aesthetic  
9       mitigation plantings), however, the amount of water used for these temporary,  
10      construction-phase related efforts will be limited in duration and will only be  
11      utilized if needed. VELCO will limit water demand post-construction as the  
12      substation facilities are not staffed on a regular basis, and only intermittently visited  
13      by maintenance personnel. Exhibit Petitioner JR-3, section 6.

14

15    Q14. Will the Project have an undue adverse effect on water conservation?

16    A14. No. The operation of the proposed facilities will not require the utilization of water  
17      beyond the intermittent use of a single bathroom by maintenance personnel. As  
18      such, the proposed Project will not have an undue adverse effect on water  
19      conservation. Exhibit Petitioner JR-3, section 6.

20

1 Q15. Will the Project burden existing water supplies?

2 A15. No. The Project will require and VELCO will obtain the necessary State  
3 Wastewater System and Potable Water Supply Permit for the substation control  
4 building's water/wastewater connections. VELCO is still in the siting and design  
5 phase of its proposed onsite water supply and wastewater system, as part of this  
6 effort, VELCO and its design engineer will evaluate the viability of utilizing the  
7 existing well and septic system for the new control building. The substation facility  
8 will have a limited demand for water post-construction, as the substation facilities  
9 are not regularly staffed, and only intermittently visited by operation and  
10 maintenance personnel. Water usage onsite is expected to increase temporarily  
11 during construction; however, water will only be used on an as-needed basis as  
12 described above. As such, the proposed Project will not burden the existing water  
13 supplies. Exhibit Petitioner JR-3, section 11.

14

15 **10. Floodways [10 V.S.A. § 6086(a)(1)(D)]**

16 Q16. Is any part of the Project located within a 100-year flood boundary or floodplain?

17 A16. Yes. TRC determined that a portion of the Project activities are located on lands  
18 that meet criteria (§ 6086(a)(1)(D)) related to floodways. VELCO contracted  
19 Fitzgerald Environmental to collaborate with TRC to review available Federal  
20 Emergency Management Agency Flood Insurance Rate Maps, and conduct an  
21 analysis of the hydrology and hydraulics of the Florence Substation property with  
22 the goal of better understanding the extent of the floodplain. Through this analysis,

1 Fitzgerald Environmental has proposed an adjustment to the 100-Year floodplain  
2 mapping based on topography, site characteristics and downstream constraints.  
3 VELCO has submitted this adjustment to the Vermont's DEC Western Vermont  
4 Floodplain Manager for review in advance of the permit application. Generally,  
5 the floodplain boundary follows the Class 2 wetland boundary around the existing  
6 substation site. VELCO evaluated several Project alternatives and went through  
7 several design iterations to minimize floodplain impacts, however some  
8 unavoidable impacts to the floodplain are still required to facilitate Project  
9 construction. The Project as designed will result in the substation yard and  
10 associated equipment being above the 100-year and 500-year floodplain elevations.

11

12 Q17. Will the Project result in an undue adverse impact on the floodways criterion?

13 A17. No. VELCO met with the VT DEC's Western Vermont Floodplain Manager on-  
14 site to discuss the Project, the floodplain boundary revision, the site constraints and  
15 the minimal impacts proposed. VELCO will apply for the necessary Floodplain  
16 Permit from the VT DEC Rivers Program. VELCO confirmed with the VT DEC  
17 that the proposed Project upgrades are located outside the regulated River Corridor.  
18 VELCO will adhere to the Floodplain Permit, Construction Stormwater Discharge  
19 permit, Project-specific EPSC plan, and VEGM to minimize the Project's potential  
20 impacts to floodplains during construction. The Project will not restrict or divert  
21 the flow of flood waters, and endanger the health, safety, and welfare of the public  
22 or of riparian owners during flooding, and will not significantly increase the peak

1 discharge of the river or stream within or downstream from the area of development  
2 and endanger the health, safety, or welfare of the public or riparian owners during  
3 flooding. As such, the Project will not have an undue, adverse effect on floodways.  
4 See Exhibit Petitioner JR-3, section 7.

5

6 **11. Streams [10 V.S.A. § 6086(a)(1)(E)]**

7 Q18. Describe any streams in the Project's vicinity.

8 A18. TRC performed a desktop evaluation and completed thorough natural resource  
9 assessment surveys within the Assessment Area for the presence of streams. No  
10 streams were identified by TRC within the Assessment Area during field surveys.  
11 VELCO will manage and avoid the potential for construction stormwater  
12 discharges to reach any streams outside the Assessment Area with the  
13 implementation and adherence to a Project-specific EPSC Plan and the associated  
14 Construction Stormwater Discharge Permit that VELCO will obtain for the Project.

15

16 As such, the Project will have no undue, adverse effects on streams. Exhibit  
17 Petitioner JR-3, section 8.

18

19 **12. Shorelines [10 V.S.A. § 6086(a)(1)(F)]**

20 Q19. Does the Project affect any shorelines?

1 A19. No. TRC reviewed the Assessment Area for shorelines and determined that there  
2 are no Shorelines near the Assessment Area. As such, the Project will not have an  
3 undue adverse effect on shorelines. Exhibit Petitioner JR-3, section 9.

4  
5 **13. Wetlands [10 V.S.A. § 6086(a)(1)(G)]**

6 Q20. Will the Project result in undue, adverse effects to wetlands?

7 A20. No. TRC performed thorough field investigations specifically targeted at  
8 identifying wetlands and other natural resources and identified one large wetland  
9 (comprised of two sections, designated as PI-6d and PI-6e) within the Assessment  
10 Area pursuant to the United States Army Corps of Engineers (USACE) wetland  
11 delineation methodology. Both wetland sections are adjacent to the proposed  
12 Project activities and will require permit approval for regulated impacts. Wetland  
13 PI-6d is a large, approximately 1.43-acre, Class 2 wetland immediately west of the  
14 existing substation, and wetland PI-6e is a very small 0.02-acre Class 2 wetland  
15 which is connected to PI-6d via a culvert and is located to the north of the existing  
16 substation. VELCO has designed the Project to minimize impacts to the wetland  
17 and its regulated 50-foot buffer, however impacts are necessary to accommodate  
18 the Project. As part of the Project, two new three-pole transmission line structures  
19 and associated guy anchors are proposed within the Class II wetland, which will  
20 require tree clearing within the wetland and wetland buffer. VELCO has discussed  
21 this Project with the VT DEC and reviewed the proposed wetland classifications  
22 and the Project's proposed wetland buffer impacts. VT DEC confirmed the wetland

1 classifications as proposed by TRC. VELCO will seek the necessary authorization  
2 from the Vermont DEC Wetlands Program and the USACE as necessary for its  
3 proposed wetland and buffer impacts and will adhere to its Construction  
4 Stormwater Discharge permit, Project-specific EPSC plan, and VEGM to minimize  
5 the Project's potential impacts to wetlands during construction. Therefore, the  
6 Project will not have an undue adverse effect on wetlands. Exhibit Petitioner JR-  
7 3, section 10.

8  
9 **14. Soil Erosion [10 V.S.A. § 6086(a)(4)]**

10 Q21. Will the Project result in undue, adverse effects on soil erosion?

11 A21. No. The proposed Project will require a VT DEC Construction Stormwater  
12 Discharge Permit, as the construction activities will involve more than one acre of  
13 earth disturbance. VELCO will develop and adhere to a detailed EPSC plan for the  
14 Project to facilitate compliance and proper implementation of stormwater Best  
15 Management Practices (BMPs) that VELCO can implement to avoid and minimize  
16 soil erosion during construction.

17  
18 Consequently, VELCO will perform all earth-disturbing activities in accordance  
19 with the site-specific EPSC Plan, the Construction Stormwater Permit conditions,  
20 the Vermont Standards and Specifications for EPSC, and the VEGM. With the  
21 adherence to these conditions and BMPs, the proposed construction activities will

1 not cause undue, adverse effects on soil erosion, or cause a reduction in the capacity  
2 of the land to hold water from the Project. Exhibit Petitioner JR-3, section 12.

3  
4 **15. Rare and Irreplaceable Natural Areas, Necessary Wildlife Habitat,**

5 **Endangered Species [10 V.S.A. § 6086(a)(8)]**

6 Q22. Will the Project have an undue adverse effect on rare and irreplaceable natural  
7 areas, necessary wildlife habitat, or threatened or endangered species?

8 A22. No. TRC performed an assessment for Rare and Irreplaceable Natural Areas  
9 (RINA), Necessary Wildlife Habitat, and Rare Threatened and Endangered (RTE)  
10 Species in 2014, and performed follow-up surveys in 2021 and did not identify any  
11 occurrences of RINA or RTE Species in or adjacent to the Assessment Area.  
12 Exhibit Petitioner JR-3, at 16.0.

13  
14 Based on a database inquiry of the U.S. Fish & Wildlife Service (“USFWS”)  
15 Information for Planning and Consultation (“IPaC”) database, two federally-listed  
16 species have known ranges within the Assessment Area: the Indiana bat which is  
17 Federally Endangered, and the northern long-eared bat which is Federally  
18 Threatened.

19  
20 TRC conducted an Indiana Bat Habitat assessment in accordance with Vermont  
21 Fish and Wildlife (VT F&W) and USFWS guidelines. Several potential roost trees  
22 were identified as part of this survey. VELCO anticipates clearing these trees prior  
23 to April 1, 2022. If this is not achievable, , VELCO will develop a project-specific

1 bat impact mitigation plan, which would likely include, targeted surveys and the  
2 implementation of potential mitigation measures to allow for the clearing of trees  
3 between April 1 and October 31 in accordance with VELCO's Bat BMPs (included  
4 in the VEGM), applicable Vermont and Federal guidelines and in consultation VT  
5 F&W and USFWS.

6

7 TRC conducted a thorough field survey of the calcareous bedrock to the north and  
8 east of the existing substation. No RTE species were identified as part of this  
9 follow-up survey. As such, the Project will have no undue adverse effect on any of  
10 these natural resources. Exhibit Petitioner JR-3, section 13.

11

12 As such, the Project will have no undue adverse effect on RINA, Necessary  
13 Wildlife Habitat, or Threatened or Endangered Species. Exhibit Petitioner JR-3,  
14 section 13.

15

16 **16. Greenhouse Gas Impacts [30 V.S.A. § 248(b)(5)]**

17 Q23. Will the proposed VELCO work have any significant greenhouse gas impacts?

18 A23. No. VELCO's proposed construction activities will result in the release of minor  
19 emissions associated with the operation of gasoline and diesel-powered engines and  
20 equipment. These activities, however, will be limited in nature and duration.  
21 Moreover, there will be no sustained releases of greenhouses gases (GHG)  
22 associated with the operation of the facilities.

1  
2 VELCO will retire the existing 46 kV breakers (existing oil circuit breakers) and  
3 install (4) new 46 kV vacuum breakers that will not contain SF6 gas. VELCO will  
4 also retire one circuit switcher containing approximately 3 pounds of SF6 gas. The  
5 Project will require VELCO to install (1) 115 kV and (1) 42 kV SF6 breakers for  
6 the capacitor. These breakers are similar to those currently installed at numerous  
7 other VELCO substations and utilize a temperature compensated gas pressure  
8 gauge. Each SF6 gas breaker will also be equipped with a real-time monitoring  
9 device that measures SF6 density and SF6 moisture dew point, in addition to several  
10 other non-SF6 related functions. The Florence substation will contain  
11 approximately 94.2 pounds (pending final vendor selection) in total, of SF6 gas  
12 within the various breakers on site. VELCO's total nameplate capacity of SF6 gas  
13 containing equipment on its entire transmission system will be 30,828.6 pounds  
14 following the Florence Substation Project's net increase of 91.2 pounds of SF6. This  
15 net increase is largely the result of replacing the existing oil containing breakers  
16 with SF6 gas containing breakers. VELCO will ensure proper handling and  
17 recycling of SF6 gas containing equipment during the Project through  
18 implementation and adherence to its SF6 Policy, which has been reviewed and  
19 approved by VT ANR Air Quality and Climate Division as part of previous  
20 collaborative review meetings for these iterative VELCO substation upgrade  
21 projects. In compliance with the US Environmental Protection Agency (EPA)  
22 Greenhouse Gas Reporting Program, VELCO will report its SF6 leakage quantities

1 to the EPA on an annual basis. VELCO provides this same SF6 leakage quantity  
2 information to VT ANR as a result of previous agreements. As such, there will be  
3 no undue, adverse effect associated with greenhouse gas emissions associated with  
4 the proposed Project. Exhibit Petitioner JR-3, section 15; Exhibit Petitioner JR-6.

5 **17. Use of Natural Resources [30 V.S.A. § 248(b)(5)]**

6 Q24. Will the Project work use natural resources?

7 A24. VELCO will construct this Project while minimizing the use of natural resources.  
8 It is expected that VELCO will use a minor amount of natural resources to complete  
9 the Project, which will be mainly limited to the clearing of vegetation, the use of  
10 stone to surface the substation yards, and the utilization of petroleum based fuels  
11 and lubricants associated with the operation of gasoline and diesel powered  
12 vehicles and equipment. Additionally, VELCO is planning to reuse rock that it will  
13 remove from the site to facilitate the construction of the substation. VELCO will  
14 crush this rock on-site and place it as fill to support substation construction.  
15 VELCO will truck the surplus rock off-site with the intent to use it on other VELCO  
16 projects such as, the resurfacing and stabilization of nearby transmission line access  
17 roads. As such, there will be no undue adverse use of natural resources.

18

1   **18.   Primary Agricultural Soils [30 V.S.A. § 248(b)(5)]**

2   Q25. Does the Project have an undue adverse effect on primary agricultural soils as  
3       defined by 10 V.S.A. § 6001(15)?

4   A25. No. As indicated on the Natural Resources Map in Attachment A of Exhibit  
5       Petitioner JR-3, there are Statewide (b) Primary Agricultural Soils (“PAS”) within  
6       the Assessment Area at the substation Project site. There are no areas within the  
7       mapped Statewide importance soils associated with the Project activities currently  
8       used for agriculture and the surrounding industrial development and proximity to  
9       supporting infrastructure largely precludes agricultural use of the land.  
10      Furthermore, the total area of proposed impact to the mapped Statewide (b)  
11      importance soils is below two acres, as such, there will be no undue adverse impacts  
12      to mapped (and currently non-functioning) Statewide importance soils from the  
13      Project. Exhibit Petitioner JR-3, section 21.

14

15   **19.   Conclusion**

16   Q26. Does this conclude your testimony at this time?

17   A26. Yes, it does.