

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Case No. 23-xx-PET

Petition of Vermont Transco LLC, and
Vermont Electric Power Company, Inc. for a
certificate of public good, pursuant to 30
V.S.A. § 248(j), authorizing upgrades to
VELCO's existing Tafts Corner Substation in
Williston, Vermont

**PREFILED TESTIMONY OF JACOB REED
ON BEHALF OF VERMONT ELECTRIC POWER COMPANY, INC.**

This testimony and associated exhibits have been filed ePUC

September 29, 2023

Jacob Reed's testimony addresses VELCO's proposal to upgrade VELCO's existing substation located at 525 Sycamore Street, Williston (the "Project"). VELCO would install all upgrades within the existing substation fence. Mr. Reed also addresses the specific environmental and historic sites criteria under 30 V.S.A. § 248(b)(5).

TABLE OF CONTENTS

1.	Introduction.....	1
2.	Testimony Overview.....	2
3.	Historic Sites [30 V.S.A. § 248(b)(5)].....	3
4.	Natural Environment [30 V.S.A. § 248(b)(5)].....	4
5.	Outstanding Resource Waters [10 V.S.A. § 1424a(d) & 30 V.S.A. § 248(b)(8)] ..	5
6.	Water and Air Pollution [10 V.S.A. § 6086(a)(1)]	5
7.	Headwaters [10 V.S.A. § 6086(a)(1)(A)]	7
8.	Waste Disposal [10 V.S.A. § 6086(a)(1)(B)]	8
9.	Water Conservation & Supply [10 V.S.A. § 6086(a)(1)(C) & (a)(2)&(3)].....	9
10.	Floodways [10 V.S.A. § 6086(a)(1)(D)].....	10
11.	Streams [10 V.S.A. § 6086(a)(1)(E)].....	11
12.	Shorelines [10 V.S.A. § 6086(a)(1)(F)].....	11
13.	Wetlands [10 V.S.A. § 6086(a)(1)(G)]	11
14.	Soil Erosion [10 V.S.A. § 6086(a)(4)].....	11
15.	Rare and Irreplaceable Natural Areas, Necessary Wildlife Habitat, Endangered Species [10 V.S.A. § 6086(a)(8)].....	12
16.	Greenhouse Gas Impacts [30 V.S.A. § 248(b)(5)].....	13
17.	Use of Natural Resources [30 V.S.A. § 248(b)(5)].....	14
18.	Primary Agricultural Soils [30 V.S.A. § 248(b)(5)]	15
19.	Conclusion	15

EXHIBITS

Exhibit Petitioner JR-1	Résumé of Jacob Reed
Exhibit Petitioner JR-2	VELCO's Environmental Guidance Manual (this document has been provided ePUC only)
Exhibit Petitioner JR-3	Natural Resources Map
Exhibit Petitioner JR-4	SF6 Policy

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) Senior Environmental Specialist leading environmental reviews and
5 permitting for the Tafts Corner 115 kV Breaker Project. My business address is
6 Vermont Electric Power Company, Inc., 366 Pinnacle Ridge Road, Rutland, VT
7 05701.

8

9 Q2. Please describe your education and employment background.

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

20

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

3 A3. Yes. I offered testimony at the Commission in support of VELCO’s Middlebury
4 substation project in Case No. 23-0132-PET, VELCO’s Florence Substation
5 Project in Case No. 21-3732-PET, VELCO’s New Haven Operations Facility in
6 Case No. 19-4582-PET, and VELCO’s East Avenue and Queen City Substation
7 Improvement Project in Case No. 18-5029-PET. I have also led several permitting
8 efforts for VELCO and supported other VELCO staff in the development of their
9 prefiled testimony and exhibits for other projects brought before the Commission,
10 including several associated with the Statewide Radio Project. And I have prepared
11 several Act 250 land use permit applications for VELCO that includes addressing
12 the criteria contained in 10 V.S.A. Section 6086.

13

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

15 A4. Yes. I am a Certified Professional in Erosion and Sediment Control (CPESC
16 #7669). I also hold OSHA 40-hour certification for Hazardous Waste Operations
17 and Emergency Response (HAZWOPER) (29 CFR 1910.120).

18

19 **2. Testimony Overview**

20 Q5. What is the purpose of your testimony?

21 A5. My testimony summarizes how VELCO’s proposal to upgrade its existing
22 substation located at 525 Sycamore Street, in Williston, Vermont (Project) will

1 comply with the environmental and historic sites criteria applicable to electric
2 transmission projects under 30 V.S.A. § 248. Specifically, my testimony addresses
3 the following statutory criteria: outstanding resource waters (10 V.S.A. §
4 1424a(d)), air pollution (10 V.S.A. § 6086(a)(1)), headwaters, (10 V.S.A. §
5 6086(a)(1)(A)), waste disposal (10 V.S.A. § 6086(a)(1)(B)), water conservation (10
6 V.S.A. § 6086(a)(1)(C)), floodways (10 V.S.A. § 6086(a)(1)(D)), shorelines (10
7 V.S.A. § 6086 (a)(1)(F)), streams (10 V.S.A. § 6086(a)(1)(E)), wetlands (10 V.S.A.
8 § 6086(a)(1)(G)), water supply (10 V.S.A. § 6086(a)(2) and (3)), soil erosion (10
9 V.S.A. § 6086 (a)(4)), and threatened and endangered species, rare and
10 irreplaceable natural areas and necessary wildlife habitat (10 V.S.A. § 6086(a)(8)).
11 My testimony also addresses additional criteria under 30 V.S.A. § 248(b)(5):
12 historic sites, greenhouse gas impacts, use of natural resources, and primary
13 agricultural soils.

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

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

16 A6. No. A “historic site” is a site that has been officially included in the National
17 Register of Historic Places and/or the state register of historic places. The Project
18 is located at an existing substation and thus any above ground historic sites that
19 may have been present in the past are gone. In addition, the proposed Project does
20 not include tree clearing, does not propose any substantive changes to the existing
21 landscape, which is dominated by electrical infrastructure (substation yard and

1 equipment and overhead transmission and distribution lines), and the upgrades will
2 look similar to existing conditions. As such, the Project will not adversely affect
3 historic properties in the vicinity, since the site will remain in the same general
4 configuration, use and management once completed.

5

6 The Project will not impact below-ground historic sites as all areas of disturbance
7 have been previously disturbed. Therefore, the Project will not have an undue,
8 adverse effect on historic sites.

9

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

11 Q7. Will the proposed Project have an undue adverse effect on the applicable Section
12 248 environmental criteria?

13 A7. No. VELCO will perform all work within the existing substation fence on disturbed
14 land and thus the Project will not have an undue impact. VELCO will perform all
15 work in accordance with the VELCO Environmental Guidance Manual (VEGM),
16 (Exhibit Petitioner JR-2). As such, the Project will not result in any undue, adverse
17 effects on the natural environment.

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

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

4 A8. No. There are no Outstanding Resource Waters within or in the vicinity of the
5 Project area. In addition, VELCO will perform all work within the existing
6 substation fence on disturbed land. Therefore, the proposed Project will have no
7 undue, adverse effect on Outstanding Resource Waters. Please see Exhibit
8 Petitioner JR-3 for a natural resources map.

9
10 **6. Water and Air Pollution [10 V.S.A. § 6086(a)(1)]**

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

12 A9. No. Work during the Project's construction phase will result in minor air emissions.
13 There will be vehicle emissions at the sites from the use of diesel and gasoline
14 powered vehicles and equipment. There may also be brief releases of dust
15 generated during equipment and material transport, limited excavation, and general
16 construction activities; however, VELCO will manage dust resulting from
17 construction activities in accordance with the Vermont Standards and Specification
18 for Erosion Prevention and Sediment Control (EPSC) and the VEGM.
19 Furthermore, Project operation, upon completion of the construction phase, will not
20 produce any regulated air emissions. Therefore, the Project will not have an undue,
21 adverse effect on air quality.

22

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

2 A10. No. The proposed Project activities will not involve more than one half (0.5) acre
3 of earth disturbance; therefore, the Project will not require VELCO to obtain a
4 Vermont Department of Environmental Conservation (VT DEC) Construction
5 Stormwater Discharge Permit. In addition, VELCO will perform all work within
6 the substation fence. Regardless, VELCO will perform all earth disturbing activities
7 in accordance with the Vermont Standards and Specifications for EPSC and the
8 VEGM. The Taft's Corner substation is included in VELCO's *Spill Prevention,*
9 *Control, and Countermeasure (SPCC) Plan*, which addresses the operational oil-
10 filled equipment at the substation to prevent a discharge of oil into navigable
11 waters. VELCO will adhere to its SPCC Plan, which includes site-specific drainage
12 pathways and detailed information on spill response measures to ensure protection
13 of waters adjacent to the substation in the event of a release of oil or hazardous
14 material to the environment. Implementation and adherence to an EPSC Plan that
15 will be produced for the Project's construction phase, VEGM, SPCC Plan, and
16 environmental compliance oversight inspections will ensure the protection of water
17 quality during Project construction activities.

18
19 If a release of a hazardous material were to occur during the Project's construction
20 phase, VELCO would take appropriate steps to contain it; report the release to the
21 DEC (as necessary); remove the contaminated material from the site for proper
22 disposal; and restore the area in accordance with the VEGM (Exhibit Petitioner JR-

1 2) and applicable State and Federal Regulations. The implementation and
2 adherence to a site specific EPSC Plan, the VEGM, and updated SPCC Plan during
3 construction and upon completion of the proposed project upgrades will maintain
4 existing water quality at the Project site. As such, there will be no undue adverse
5 effect to water quality.

6
7 **7. Headwaters [10 V.S.A. § 6086(a)(1)(A)]**

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

9 A11. No. VELCO will confine all work to within the substation fence and VELCO
10 anticipates only minor soil disturbance. Moreover, for a project to trigger the
11 incorporated Act 250 criteria relating to headwaters, the Project must demonstrate
12 compliance with any applicable health and environmental regulations regarding the
13 reduction of the quality of the ground or surface waters flowing through or upon
14 lands which are not devoted to intensive development. These areas are defined as:
15 1) headwaters or watersheds characterized by steep slopes and shallow soils; 2)
16 drainage areas of 20 square miles or less; 3) above 1,500 feet elevation; 4)
17 watersheds of public water supplies designated by the Vermont Agency of Natural
18 Resources; or 5) areas supplying significant amounts of recharge waters to aquifers.

19 The Project area is generally not characteristic of headwater areas as the work is
20 within an existing substation, where there are no steep slopes or shallow soils, and
21 the Project is below 1,500 feet in elevation. VELCO found that the Project is
22 located within the watershed of the Muddy Brook with a drainage area greater than

1 21 square miles and that the site does not meet the headwaters criteria. Additionally,
2 VELCO reviewed the Agency of Natural Resources Atlas and confirmed that there
3 are no public water supplies or associated source protection areas (SPA) near the
4 Project.

5
6 Additionally, the Project would not create an undue adverse impact on the
7 headwater criterion. The potential effects of the Project on ground and surface
8 water quality will be minimal. With the implementation of the practices and
9 standards contained within the VEGM, Vermont Standards and Specifications for
10 EPSC, and the site-specific SPCC, and Countermeasure Plans, the Project will have
11 minimal potential to adversely affect the natural flow regime, groundwater
12 recharge, the condition or water quality of streams, groundwater, and wetlands, or
13 public health. The Project will meet any applicable health and environmental
14 conservation department regulations regarding the reduction of the quality of the
15 ground or surface waters flowing through or upon lands. Therefore, the Project will
16 not result in undue adverse effects to headwaters.

17

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

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

20 A12. The Project is limited in scope and size and consists primarily of installing new
21 components within the substation, and as such, will involve limited waste disposal,
22 with the majority associated with the construction phase. VELCO will handle and

1 dispose of any waste generated from this Project in compliance with State of
2 Vermont Solid Waste Management Rules. Metal equipment will be recycled as
3 scrap metal.

4
5 VELCO will stockpile and dispose of clean wood products that are brought onsite
6 during Project construction as part of equipment and/or material deliveries (i.e.
7 pallets) in accordance with Act 148, the Universal Recycling and Composting Law.
8 The implementation and adherence to the items listed above will ensure that proper
9 waste disposal practices are performed during Project construction and operation.

10
11 The Project does not require an operational stormwater permit because the total
12 resulting impervious area following completion of the proposed Project upgrades
13 will be less than one acre and new impervious is limited to installing one foundation
14 that is approximately four square feet. Therefore, the Project will not have an
15 undue, adverse effect on waste disposal.

16
17 **9. Water Conservation & Supply [10 V.S.A. § 6086(a)(1)(C) & (a)(2)&(3)]**

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

19 A13. The Project will, where technically and economically feasible, incorporate
20 measures to conserve water use, recycle water, and maintain the efficient operation
21 of any such measures. There is the potential that the Project will need to use water
22 for dust control; however, the amount of water used for these temporary,

1 construction-phase activities will be limited in duration and will only be utilized if
2 needed. VELCO will limit water demand post-construction as the substation
3 facilities are not staffed, and only intermittently visited by maintenance personnel.
4

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

6 A14. No. The Project does not include any new water connections and will not change
7 the operational characteristics of the single bathroom used by maintenance
8 personnel. As such, the proposed Project will not have an undue adverse effect on
9 water conservation.
10

11 Q15. Will the Project burden existing water supplies?

12 A15. No, as limited water is needed for dust control.
13

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

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

16 A16. No. VELCO analyzed the available Federal Emergency Management Agency
17 Flood Insurance Rate Maps and determined that the Project activities are not
18 located on any lands that meet criteria (10 V.S.A. § 6086(a)(1)(D)) related to
19 floodways. In addition, VELCO will perform all work within the existing
20 substation fence on disturbed land. As such, the Project will not have an undue,
21 adverse effect on floodways. Exhibit Petitioner JR-3.
22

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

2 Q17. Will the Project have an undue adverse effect on any streams?

3 A17. There are no streams located within the Project area. In addition, VELCO will
4 perform all work within the existing substation fence on disturbed land. As such,
5 the Project will have no undue, adverse effect on streams. Exhibit Petitioner JR-3.

6
7 **12. Shorelines [10 V.S.A. § 6086(a)(1)(F)]**

8 Q18. Does the Project affect any shorelines?

9 A18. No. There are no surface waters (lakes, ponds, reservoirs, or rivers) within or near
10 the Project area that would constitute a shoreline as defined by 10 V.S.A. 6001(17)
11 or Act 250. In addition, VELCO will perform all work within the existing
12 substation fence on disturbed land. As such, the proposed Project will not have an
13 undue adverse effect on shorelines. Exhibit Petitioner JR-3.

14

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

16 Q19. Will the Project result in undue, adverse effects to wetlands?

17 A19. No. The Project will occur within an existing substation fence where no wetlands
18 are located. As such, there will be no undue adverse effect to wetlands because of
19 the Project. Exhibit Petitioner JR-3

20

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

22 Q20. Will the Project result in undue, adverse effects on soil erosion?

1 A20. No. The proposed Project consists primarily of minimal work within an existing
2 facility, which is a level and pervious gravel surface that greatly reduces the
3 potential for adverse soil erosion. The Project involves less than one half (0.5) acre
4 of earth disturbance and thus does not trigger the need for a VT DEC Construction
5 Stormwater Discharge Permit (CGP). VELCO will facilitate compliance and
6 proper implementation of stormwater Best Management Practices (BMPs) that
7 VELCO can implement to avoid and minimize soil erosion during construction.
8
9 VELCO will perform all earth-disturbing activities in accordance with a site-
10 specific EPSC Plan, the Vermont Standards and Specifications for EPSC, and the
11 VEGM. With the adherence to these applicable BMPs, the proposed construction
12 activities will not cause undue, adverse effects on soil erosion, or cause a
13 reduction in the capacity of the land to hold water from the Project.

14
15 **15. Rare and Irreplaceable Natural Areas, Necessary Wildlife Habitat,**
16 **Endangered Species [10 V.S.A. § 6086(a)(8)]**

17 Q21. Will the Project have an undue adverse effect on rare and irreplaceable natural
18 areas, necessary wildlife habitat, or threatened or endangered species?

19 A21. No. VELCO will perform all work within the existing developed substation yard
20 and maintained areas. As such, the Project will have no undue adverse effect on
21 RINA, Necessary Wildlife Habitat, or Threatened or Endangered Species.

22

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

2 Q22. Will the proposed VELCO work have any significant greenhouse gas impacts?

3 A22. No. VELCO’s proposed construction activities will result in the release of minor
4 emissions associated with the operation of gasoline- and diesel-powered engines and
5 equipment. These activities, however, will be limited in nature and duration.
6 Moreover, there will be no sustained releases of greenhouses gases (GHG)
7 associated with the operation of the facilities.

8

9 The Project will require VELCO to install (1) 115 kV SF6 gas insulated circuit
10 breaker. This breaker is similar to those currently installed at numerous other
11 VELCO substations and utilize a temperature compensated gas pressure gauge. The
12 SF6 gas breaker will also be equipped with a real-time monitoring device that
13 measures SF6 density and SF6 moisture dew point, in addition to several other non-
14 SF6 related functions. The existing Tafts Corner substation contains approximately
15 209 pounds of SF6 gas. After the installation of the proposed breaker The Tafts
16 Corner substation will contain approximately 270.2 pounds (pending final vendor
17 selection) in total, of SF6 gas within the various breakers on site. VELCO’s total
18 nameplate capacity of SF6 gas containing equipment on its entire transmission
19 system will be 31,554.4 pounds following the Tafts Corner Substation Project’s net
20 increase of 61.2 pounds of SF6. VELCO will ensure proper handling and recycling
21 of SF6 gas containing equipment during the Project through implementation and
22 adherence to its SF6 Policy, which has been reviewed and approved by VT ANR

1 Air Quality and Climate Division as part of previous collaborative review meetings
2 for these iterative VELCO substation upgrade projects. In compliance with the US
3 Environmental Protection Agency (EPA) Greenhouse Gas Reporting Program,
4 VELCO will report its SF6 leakage quantities to the EPA on an annual basis.
5 VELCO provides this same SF6 leakage quantity information to VT ANR as a result
6 of previous agreements. As such, there will be no undue, adverse effect associated
7 with greenhouse gas emissions associated with the proposed Project. Exhibit
8 Petitioner JR-4.

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

10 Q23. Will the Project work use natural resources?

11 A23. VELCO will construct this Project while minimizing the use of natural resources.
12 It is expected that VELCO will use a minor amount of natural resources to complete
13 the Project, which will be mainly limited to the use of stone to re-surface portions
14 of the substation yard, and the utilization of petroleum-based fuels and lubricants
15 associated with the operation of gasoline and diesel-powered vehicles and
16 equipment. As such, there will be no undue adverse use of natural resources.

17

18

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21

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

2 Q24. Does the Project have an undue adverse effect on primary agricultural soils as
3 defined by 10 V.S.A. § 6001(15)?

4 A24. No, the Project is within an existing developed substation yard and as such, there
5 will be no undue adverse impacts to mapped primary agricultural soils.

6

7 **19. Conclusion**

8 Q25. Does this conclude your testimony at this time?

9 A25. Yes, it does.