

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Case No. 23-_____

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 construction of the “Franklin County Line Upgrade Project” consisting of upgrades to VELCO’s existing K42 transmission line in Georgia, St. Albans, Swanton, and Highgate, Vermont	
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**PREFILED TESTIMONY OF ANDREW MCMILLAN
ON BEHALF OF VERMONT ELECTRIC POWER COMPANY, INC.
AND VERMONT TRANSCO LLC**

October 26, 2023

Andrew McMillan’s testimony demonstrates that the Franklin County Line Upgrade Project will not have an undue adverse effect on historic sites, air and water purity, or the natural environment as described under 30 V.S.A. §§ 248(b)(5) & (8).

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EXHIBITS

Exhibit Petitioner AM-1	Résumé of Andrew K. McMillan
Exhibit Petitioner AM-2	VELCO Franklin County Line Upgrade Project - Natural Resources Report
Exhibit Petitioner AM-3	Phase 1 Archaeological Identification Survey Report
Exhibit Petitioner AM-4	Architectural Reconnaissance Survey Franklin County Line Upgrade Project
Exhibit Petitioner AM-5	Non-Native Invasive Species Monitoring & Control Plan
Exhibit Petitioner AM-6	VELCO Environmental Guidance Manual 2.0

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ON BEHALF OF VERMONT ELECTRIC POWER COMPANY, INC.
AND VERMONT TRANSCO LLC

Introduction

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

2 **A1.** My name is Andrew K. McMillan. I am a Senior Environmental Specialist for
3 Vermont Electric Power Company, Inc. (together with VT Transco LLC referred to as
4 “VELCO”) leading the environmental permitting efforts for the Franklin County Line Upgrade
5 Project (herein referred to as the “Project” or “FCLU”). My business address is Vermont
6 Electric Power Company, Inc., 366 Pinnacle Ridge Road, Rutland, VT 05701.

7

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

9 **A2.** In 2007, I received a Bachelor of Arts degree in Environmental Science from the
10 State University of New York College at Plattsburgh, with a study option in Environmental
11 Planning and Management and a minor in Applied Geographic Information Systems. I also
12 received a post-baccalaureate certificate in Geographic Information Systems from The
13 Pennsylvania State University in December 2014 and a Master’s in Business Administration
14 from Castleton University in May 2020. I began working at VELCO as an Environmental
15 Specialist in 2009 where I have worked on a variety of substation facility and linear transmission
16 line upgrade projects. I am currently serving as the Environmental Permitting Lead for the
17 FCLU Project. In this role, I am responsible for scheduling and managing the natural resource
18 and above and below ground historic site assessments; agency coordination and correspondence;
19 environmental permitting; and subsequently, construction and restoration oversight to ensure

1 compliance with the Project’s environmental permits and commitments. The years prior to my
2 employment at VELCO, I was employed as an Assistant Environmental Manager at Noble
3 Environmental Power, and as a Fish & Wildlife Technician at the New York State Department of
4 Environmental Conservation. My resume is attached as **Exhibit Petitioner AM-1**.

5

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

8 **A3.** Yes, I have previously provided testimony for several projects including:

- 9 • PUC Docket No. 7763 regarding VELCO’s Bennington Substation;
- 10 • PUC Docket No. 8385 regarding VELCO’s Newport Substation;
- 11 • PUC Docket No. 8605 regarding VELCO’s Connecticut River Valley Project;
- 12 • PUC Docket No. 17-3808 regarding VELCO’s St. Albans Substation;
- 13 • PUC Docket No. 17-5240 regarding VELCO’s Barre Substation;
- 14 • Case No. 19-1812 regarding VELCO’s Berlin Substation Project;
- 15 • Case No. 20-3506 regarding VELCO’s Irasburg Substation; and
- 16 • Case No. 21-2455 regarding VELCO’s North Rutland Substation.

17 Most recently, I provided testimony in PUC Case No. 22-4338 for the VELCO Highgate
18 Substation Upgrade Project.

19

20 **Q4. Do you hold any professional licenses or certifications?**

21 **A4.** Yes. I am a Certified Professional in Erosion and Sediment Control and certified
22 Water System Operator in the State of Vermont (Operator ID# OP03924). I also hold OSHA 40-

1 hour certification for Hazardous Waste Operations and Emergency Response (29 CFR
2 1910.120).

Testimony Overview

3 **Q5. What is the purpose of your testimony?**

4 **A5.** My testimony summarizes how the Project will comply with the environmental
5 and historic sites criteria applicable to electric transmission projects under 30 V.S.A. § 248. As
6 such, my testimony provides an assessment of potential impacts upon above and below ground
7 historic sites, as well as presenting the report entitled: Franklin County Line Upgrade Project –
8 Natural Resources Report, prepared by VHB and submitted as **Exhibit Petitioner AM-2**, which
9 addresses VELCO’s proposal to upgrade VELCO’s existing K42 transmission line in Georgia,
10 St. Albans, Swanton, and Highgate, Vermont. Specifically, my testimony addresses the
11 following statutory criteria: outstanding resource waters (10 V.S.A. § 1424a(d) and 30 V.S.A. §
12 248(b)(8)), air and water pollution (10 V.S.A. § 6086(a)(1)), headwaters, (10 V.S.A. §
13 6086(a)(1)(A)), waste disposal (10 V.S.A. § 6086(a)(1)(B)), water conservation (10 V.S.A. §
14 6086(a)(1)(C)), floodways (10 V.S.A. § 6086(a)(1)(D)), shorelines (10 V.S.A. § 6086 (a)(1)(F)),
15 streams (10 V.S.A. § 6086(a)(1)(E)), wetlands (10 V.S.A. § 6086(a)(1)(G)), water supply (10
16 V.S.A. § 6086(a)(2) and (3)), soil erosion (10 V.S.A. § 6086 (a)(4)), and threatened and
17 endangered species, rare and irreplaceable natural areas, and necessary wildlife habitat (10
18 V.S.A. § 6086(a)(8)). My testimony also addresses additional criteria under 30 V.S.A. §
19 248(b)(5): historic sites, greenhouse gas impacts, use of natural resources, and primary
20 agricultural soils.

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

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

2 **A6.** No. Generally, a “historic site” is a site that has been officially included or
3 “registered” in the National Register of Historic Places and/or the state register of historic places.
4 The Project, as proposed, will not have an undue adverse impact on historic sites.

5 VELCO retained WSP USA Inc. (WSP) to perform an Archaeological Resource
6 Assessment (“ARA”) and follow-up Phase 1 Archaeology Survey, provided as **Exhibit**
7 **Petitioner AM-3**,¹ as well as a Historical Architectural reconnaissance, **Exhibit Petitioner AM-**
8 **4**, to determine the proposed Project area’s sensitivity for archaeological and historic resources.

9 Upon completing the historic architectural survey, WSP found that the FCLU, as
10 proposed, will not adversely affect the six historic properties located along the existing K42 Line
11 right-of-way nor will the Project indirectly affect the sixteen historic properties within the
12 Project viewshed. Exhibit Petitioner AM-4 at 90.

13 Historic architectural survey effort included both background research and field-based
14 reconnaissance throughout the Project’s Area of Potential Effects (“APE”). The APE, as
15 determined by WSP, consisted of the proposed K42 Line’s viewshed, which was generated from
16 a geographic information systems spatial analysis that incorporates terrain, existing vegetation
17 and the proposed Project elements to delineate areas where transmission line structure/s may be
18 visible. Exhibit Petitioner AM-4 at 3.

¹ Exhibit Petitioner AM-3 is a redacted version of WSP’s Phase 1 Archaeology Survey in which the confidential information has been removed. A copy of the full report, including confidential information, has been provided to the Vermont Division for Historic Preservation. If the Commission would also like the confidential version, upon request, VELCO will promptly submit a copy in this proceeding under seal.

1 While the proposed FCLU Project transmission structures (poles) will be slightly taller
2 than the existing structures they replace, WSP concluded that the transmission line replacement
3 would not directly affect any historic property in a manner that would result in the alteration of
4 significant architectural features. Exhibit Petitioner AM-4 at 90. As such, upgrading the K42
5 Line from its existing wooden H-frame configuration to the proposed slightly taller steel single-
6 pole design will not have an undue adverse effect on above ground historic sites.

7 As part of the comprehensive historic sites evaluation performed for the Project, WSP
8 also conducted an ARA and Phase 1 Survey for below ground sites to be potentially affected by
9 the FCLU construction activities, including the 115kV K42 Line corridor and adjacent
10 construction support areas (e.g., laydown yards and off right-of-way access roads). As part of
11 this archaeological assessment effort, WSP submitted the ARA findings and Phase 1 field testing
12 work plan to the Vermont Division for Historic Preservation (“VDHP”) for review and comment
13 in July 2022. VELCO submitted a follow up request to VDHP again in June 2023 for
14 supplemental construction support areas and the few locations that were not accessible for testing
15 during the 2022 field survey effort. To address the Historic Sites criterion and advance the
16 Project schedule, WSP executed the Phase 1 fieldwork in accordance with the VDHP
17 consultation letter and Vermont Guidelines for Conducting Archeology in Vermont (2017). The
18 work plan and methods employed by WSP on the K42 line corridor, access roads, and
19 construction support areas align with past Historic Site assessment practices employed on
20 numerous successfully permitted and executed VELCO 248 projects (see the Methodology
21 sections of the respective WSP reports for details). In total, WSP excavated 2,456 shovel test
22 pits throughout the Project area within previously mapped historic sites coincident with the K42

1 Line corridor and areas deemed archaeological sensitive from the ARA. Exhibit Petitioner AM-
2 3, at 234. The initial Phase 1 shovel testing occurred during late summer and fall of 2022 with
3 some supplemental testing conducted in June of 2023.

4 WSP recovered precontact and postcontact (historic) artifacts during Phase 1 testing for
5 the Project. As further described by WSP in their report, a “site” is not in all cases equivalent to
6 a “Historic Site,” as some recovered materials were either too dispersed or too limited in quantity
7 to be considered eligible for listing in the National Register of Historic Places (NRHP) and/or
8 State Register of Historic Places (SRHP). See Exhibit Petitioner AM-3, at 234-36.

9 Background research conducted by WSP as part of the ARA identified five previously
10 recorded sites within the FCLU Project’s APE. Following extensive Phase 1 sub-surface shovel
11 testing in and around the locations where these five previously recorded sites were coincident
12 with the APE (near structures 221-222, 251, 412, 415, and 416), WSP concluded that none were
13 eligible for listing in the NRHP or SRHP and that, therefore, no further avoidance or subsurface
14 testing was warranted for the Project. Given WSP’s extensive field testing, analysis and ultimate
15 determination that the previously recorded sites within the Project’s APE are not significant or
16 eligible for listing, VELCO is not proposing to implement avoidance or ground protective
17 measures (e.g., temporary timber matting) for its structure replacement work in these areas.

18 WSP did, however, identify five new sites as part of the extensive Phase 1 sensitive area
19 testing for the Project. Based on their findings, WSP concluded that only two of the five newly
20 identified sites are potentially significant and could be eligible for listing. VELCO has designed
21 its construction practices for the FCLU Project to avoid impacts to the two potentially significant
22 archaeological sites. WSP concluded that the other three newly identified sites were not

1 significant (and thus not Historic Sites) as they lacked intact deposits and/or integrity, or were
2 isolated finds. See Exhibit Petitioner AM-3, at 235-36.

3 Surface finds and subsurface tests recovered pre-contact materials at a newly located Site
4 in the vicinity of a proposed mat staging area along an off-ROW (farm field) access road west of
5 structure 247. An existing working farm-scale compost pile precluded WSP's ability to perform
6 comprehensive shovel testing in a portion the ARA deemed sensitive. The artifacts WSP was
7 able to recover from the 100 shovel test pits excavated in the area and within the adjacent field
8 did not provide enough information for WSP to deem the site as significant or eligible for listing.
9 As such, WSP recommended that the Project avoid ground disturbing activities in this area, both
10 for the untested area beneath the compost pile and for the portion of undisturbed land between
11 the active cornfield to the east and the compost pile to the west coincident with the recovered
12 precontact cultural materials. Exhibit Petitioner AM-3, at 235. VELCO will deploy timber mats
13 as recommended by WSP to mitigate potential impacts to this newly located site that is
14 coincident with a proposed temporary construction support/staging area. In addition to the use of
15 matting to avoid ground disturbance in the area, VELCO will also train its construction crews
16 and install protective signage to ensure protection of the area as described by WSP.

17 As the proposed use of the area west of structure 247 consists of a proposed temporary
18 mat staging area for the Project's construction phase, VELCO will be able to utilize the area as
19 intended while not creating ground disturbance. VELCO will accomplish the ground protection
20 measures with temporary construction mats installed and removed in accordance with the
21 methods outlined in its VELCO Environmental Guidance Manual ("VEGM") (e.g., placed, not
22 dragged or dropped in order to protect and preserve the underlying soils).

1 Newly identified Site in the vicinity of Structure 244 revealed enough pre-Contact
2 artifacts from five positive test pits to suggest that additional intact cultural materials may be
3 present outside the ROW / APE. WSP concluded that additional investigation would be needed
4 to confirm eligibility for listing as a Historic Site, however, this would require subsurface testing
5 outside the VELCO easement area and outside the Project Area. Extensive subsurface testing
6 conducted throughout the entire K42 Line ROW in this area enabled WSP to delineate the site's
7 boundary proximate to the proposed work areas in the APE. No further investigative work was
8 recommended by WSP for the purpose of the proposed Project, since the portion of the
9 delineated site within the Project's APE can and will be avoided. As the positive shovel tests
10 and associated site boundary is situated on the edge of the ROW, the proposed Project activities
11 will avoid impacts to this site, VT-FR-0458. The access road and work pad for the nearby
12 structure replacement activities will not encroach on the newly identified site and VELCO will
13 employ its standard protective signage and barricade tape to ensure work crews do not enter the
14 site or travel outside the ROW/Project Area.

15 In summary, following background research and an ARA, WSP performed extensive
16 shovel tests throughout the APE in areas of confirmed archaeological sensitivity and/or where
17 known Historic Sites were located proximate to the APE. The Phase 1 testing executed from
18 2022-2023 resulted in two newly identified potentially NRHP/SRHP eligible sites. While
19 existing known Sites occur along the existing K42 line based on best available GIS data,
20 negative shovel test results conducted within those areas for the FCLU Project suggests that the
21 Sites are not actually coincident with the K42 line corridor. As the previously known and
22 documented sites did not reveal significant cultural materials in the APE and VELCO will

1 implement protective signage, barricade tape, training and matting to avoid impacts to the two
2 newly identified, potentially significant sites during construction, WSP concluded that no further
3 archaeological testing was necessary.

4 Therefore, the FCLU Project will not result in undue adverse effects on Historic Sites.

5

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

6 **Q7. Will the proposed Project have an undue adverse effect on the applicable**
7 **Section 248 environmental criteria?**

8 **A7.** No. VELCO retained VHB to perform comprehensive natural resource
9 assessments within the area of the proposed Project, which includes the K42 transmission line
10 corridor (herein referred to as right-of-way, or “ROW”), off-ROW access routes, and two
11 proposed laydown yards. See Exhibit Petitioner AM-2 (Natural Resource Report – FCLU
12 Project). The majority of the proposed work will occur within areas of previous disturbance or
13 within areas directly adjacent to existing developments, such as with the structure replacements
14 and co-located off-ROW access routes that follow existing farm field access roads. The Project
15 will only require minimal tree clearing. The K42 Line rebuild is located within an existing
16 maintained corridor for which vegetation management will occur to support construction
17 activities consistent with approved Transmission Vegetation Management Plan (“TVMP”)
18 practices as further described in Jeff Disorda’s testimony. Off-ROW access routes are coincident
19 with existing travel routes (either woods roads, driveways, or well-established farm field access
20 routes), which are generally cleared and maintained by the landowner(s) and/or VELCO. The
21 removal of overgrown woody vegetation (mainly sapling removal and limbing branches) along

1 select portions of off-ROW access roads is necessary for the safe and efficient passage of line
2 construction equipment where the access route is otherwise only passable by ATV or pickup
3 truck. VELCO is not proposing establishment of any new off-ROW access routes to the K42
4 line corridor that would entail new tree clearing or new impacts to otherwise intact forest or
5 undisturbed tracts. However, in coordination with the adjoining and underlying landowners,
6 VELCO is proposing a modified access road alignment for its St. Albans Tap Station as part of
7 this Project. Re-aligning the new permanent access road will alleviate an otherwise sharp,
8 approximately ninety-degree angle turn and an associated private property (garage) pinch point
9 for the FCLU line construction equipment and VELCO's ongoing substation and line
10 maintenance in this area. While the modified access alignment to the VELCO St. Albans Tap
11 Station will generally align with the open and maintained K42 Tap Line corridor off McCracken
12 Drive in St. Albans, a portion of the road grading will require some tree clearing along the
13 margin of a narrow strip of wooded hedgerow.

14 Vegetation management activities, which will consist of mowing within the existing K42
15 Line corridor and danger tree removal along the edge of the existing ROW, will also occur
16 during the FCLU Project's construction phase. The FLCU Project will employ mowing
17 throughout the entire width of the K42 Line ROW as part of construction sequencing, which is
18 necessary to: 1) enable safe and efficient equipment access, 2) establish work areas for the
19 structure replacements, and 3) perform wire stringing of the new line and removal of the existing
20 K42 Line to be retired. However, the K42 Line's existing 150-foot ROW limits are not
21 increasing for the proposed FCLU Project.

1 VELCO will perform work in regulated resources (e.g., wetlands) in accordance with the
2 Project specific permits issued from the Vermont Department of Environmental Conservation
3 (“VT DEC”) and the United States Army Corps of Engineers (“USACE”). VELCO will also
4 follow a VT DEC-approved project-specific Non-Native and Invasive Species (“NNIS”)
5 Monitoring and Control Plan, which is included as **Exhibit Petitioner AM-5**. In addition,
6 VELCO will perform all Project work in accordance with the VEGM, attached as **Exhibit**
7 **Petitioner AM-6**. As such, the Project will not result in any undue, adverse effects on the
8 natural environment.

9

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

10 **Q8. Will the Project result in an undue adverse effect on any Outstanding**
11 **Resource Waters?**

12 **A8.** No. The Project does not cross any portions of the listed Outstanding Resource
13 Waters (ORW):

- 14 • Batten Kill River, Towns of Dorset and Arlington;
- 15 • Pike’s Falls/Ball Mountain, Town of Jamaica;
- 16 • Poultney River, Towns of Poultney and Fair Haven; and
- 17 • Great Falls, Ompompanoosuc River, Town of Thetford.

18 As there are no ORWs in, near, or proximate to the proposed Project, the Project will not
19 result in any impacts to these resources.

20

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

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

2 **A9.** No. The operation of the proposed Project does not involve any facilities that will
3 generate air pollution, and will not be subject to an air pollution control permit under the VT
4 ANR Air Pollution Control Regulations (10 V.S.A. Section 556). During the Project's
5 construction phase, there will be vehicle emissions from the use of diesel and gasoline powered
6 vehicles and equipment. There may also be brief discharges of dust generated by equipment and
7 material transport, earthmoving, and general construction activities. VELCO will manage dust
8 resulting from construction activities in accordance with the Vermont Standards and
9 Specification for Erosion Prevention and Sediment Control and the VEGM.

10 As the Project's construction phase emissions will be limited in duration (with respect to
11 the total asset life of the rebuilt line) and the operation of the line will not generate air pollution,
12 the Project will not result in an undue adverse effect on air quality.

13

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

15 **A10.** No. The proposed Project activities will involve more than one acre of earth
16 disturbance; therefore, the Project will require appropriate coverage under VT DEC's Individual
17 Construction Stormwater Discharge Permit (INDC). VELCO will perform all earth-disturbing
18 activities in accordance with the Construction Stormwater Discharge Permit issued for the
19 Project, the Vermont Standards and Specifications for Erosion Prevention and Sediment Control,
20 and the VEGM. Prior to construction, VELCO will obtain the appropriate INDC permit for the
21 Project.

1 The proposed Project will require State and Federal permit authorizations for temporary
2 and permanent impacts to regulated wetlands and wetland buffers, which VELCO will obtain
3 prior to Project construction and will adhere to in order to maintain water quality conditions on
4 the Project. VELCO has coordinated the resource assessments, project planning, and design with
5 the VT DEC Wetlands Program for this Project. VELCO also has completed the necessary
6 Project area site visits with USACE and VT DEC Wetlands Program staff to confirm wetland
7 delineations and proposed wetland classifications, which will directly support the State and
8 Federal wetland permitting efforts.

9 If a release of a hazardous material were to occur during the Project's construction phase,
10 Petitioner would take appropriate steps to contain it; report the release to the DEC (as necessary);
11 remove the contaminated material from the site for proper disposal; and restore the area in
12 accordance with the VEGM and applicable State and Federal regulations.

13 Obtaining and complying with the Construction Stormwater Discharge Permits, Federal
14 and State Wetlands permits, the VEGM, and applicable regulations will maintain existing water
15 quality related to Project activities. As such, the Project will not result in an undue adverse
16 impact on water quality. See Exhibit Petitioner AM-2, at 9.

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

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

18 **A11.** No. In order for the incorporated headwaters criteria to be met, the Project must
19 demonstrate compliance with any applicable health and environmental regulations regarding the
20 reduction of the quality of the ground or surface waters flowing through or upon lands that are

1 not devoted to intensive development. These areas are defined as: 1) headwaters or watersheds
2 characterized by steep slopes and shallow soils; 2) drainage areas of 20 square miles or less; 3)
3 above 1,500 feet elevation; 4) watersheds of public water supplies designated by the VT ANR; or
4 5) areas supplying significant amounts of recharge waters to aquifers. VHB analyzed available
5 information and conducted field surveys in order to determine if the Project will be located in
6 any lands that meet the criteria of 10 V.S.A. § 6086(a)(1)(A). Headwater streams are generally
7 considered first-order high-elevation streams that typically have intermittent or ephemeral flow
8 regimes. There are no state-mapped surface or groundwater Source Protection Areas (“SPAs”)
9 within the Project area. While no portion of the Project is above 1,500 feet elevation, certain
10 portions of the Project area meet one or more of the headwaters sub-criteria including steep
11 slopes and shallow soils and/or a drainage area of less than 20 square miles. Based on their
12 review and assessment, VHB concluded that, given the Project’s low elevation and landscape
13 setting within the Champlain Basin, the lands do not meet the character of the headwater
14 criterion. Of note, many portions of the Project area that contain steep slopes and shallow soils
15 are limited to localized areas that generally coincide with rocky outcrops where VELCO is not
16 proposing access or construction activities (e.g., immediately north of Structure 390). The
17 potential effect of the Project upon ground and surface water quality on lands that may be
18 considered headwaters will not be significant. See Exhibit Petitioner AM-2, at 9-10.

19 For all portions of the Project, including those that meet the headwaters sub-criteria,
20 VELCO will ensure that potential affects to ground and surface water quality are appropriately
21 managed with the implementation and adherence to the Project-specific Erosion Prevention and
22 Sediment Control Plans (to be developed as part of INDC Permit coverage), and applicable

1 BMPs outlined in the VEGM. VELCO's adherence to the above protective measures will ensure
2 that construction and operation of the FCLU will not adversely affect public health, the natural
3 flow regime or groundwater recharge, condition or water quality of potential headwater streams,
4 groundwater, or wetlands. The Project will meet applicable health and environmental
5 conservation department regulations regarding the reduction of the quality of the ground or
6 surface waters flowing through or upon lands that are not devoted to intensive development,
7 including compliance with the Vermont Water Quality Standards. Therefore, the proposed
8 Project will have no undue, adverse effects on headwater resources.

9
Waste Disposal [10 V.S.A. § 6086(a)(1)(B)]

10 **Q12. Please discuss VELCO's plans regarding waste disposal.**

11 **A12.** The Project will not require nor involve the injection of any waste materials or
12 any harmful or toxic substances into ground water or wells. The Project will involve limited
13 waste disposal and hazardous material storage for equipment refueling during construction and
14 will comply with all state and federal regulations regarding the handling and disposal of waste.
15 VELCO will dispose of solid waste, construction debris, and waste that cannot be reused or
16 recycled in accordance with the applicable state and federal regulations and best management
17 practices. VELCO will dispose of sanitary waste during construction by obtaining and using
18 portable toilet(s).

19 VELCO will stockpile and dispose of clean wood products that are brought onsite during
20 Project construction as part of material deliveries (i.e. pallets) in accordance with Act 148, the
21 Universal Recycling and Composting Law. VELCO will perform the existing K42 line structure
22 replacement/removal activities in accordance with the Penta BMPs identified in Docket 8310,

1 which will be accomplished by onsite training for entities working on the Project that handle
2 penta-treated poles.

3 Impervious surfaces for the Project will remain below one acre, and the proposed St.
4 Albans Tap Station gravel driveway realignment will not exceed 0.5 acres of new impervious
5 surfaces. Therefore, this Project component, nor the remainder of the proposed work activities
6 will trigger the need to obtain 3-9050 permit (operational phase stormwater) coverage. The K42
7 Line rebuild will not generate additional impervious surfaces, as the Project will utilize existing
8 improved access routes and the proposed newly constructed, permanent access routes to
9 structures in the ROW will be restored to pervious, vegetated surfaces as part of final restoration
10 through the implementation of VELCO's standardized surface roughening, seeding, and
11 mulching efforts. The VELCO Spill Prevention, Control and Countermeasure Plan includes spill
12 prevention and response measures in the event of a release of oil or hazardous material at any of
13 the substation sites coincident with the K42 Line (Georgia Substation, St. Albans Tap Station,
14 Highgate Converter, and Highgate Substation).

15 The implementation of the above-mentioned measures will ensure that VELCO
16 incorporates proper waste disposal practices during the construction and operation of the Project.
17 As such, the Project will not have any undue adverse impacts relating to waste disposal.

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 incorporate measures to conserve water use and recycle water
20 where technically and economically feasible. As proposed, VELCO does not anticipate the need

1 or applicability of any permanent water conservation measures with the Project. During
2 construction of the FCLU Project, limited amounts of water may be necessary to control dust,
3 support limited concrete washout activities, and/or assist in vegetation establishment. Following
4 its construction and commissioning, no water usage will be necessary as part the K42 Line
5 operation.

6

7 **Q14. Will the Project burden existing water supplies?**

8 **A14.** No. As outlined above, water use associated with the Project is expected to be
9 minimal and once commissioned, the K42 Line will not use water. There is the potential that
10 water will be needed during construction activities to support vegetation establishment, limited
11 concrete washout activities, and/or dust suppression. To support these efforts, VELCO may
12 withdraw water on a temporary basis from one of the onsite water supply wells at the Georgia
13 Substation, Highgate Converter Station, Highgate Substation, and/or from waterbodies in
14 accordance with state and federal regulations, or from municipal sources (with appropriate
15 municipal approvals). Due to the limited demand for water, the proposed Project will not have
16 an undue adverse effect on water supplies.

17

Floodways [10 V.S.A. § 6086(a)(1)(D)]

18 **Q15. Will the Project restrict or divert the flow of floodwaters or increase the peak**
19 **discharge of the streams and endanger the health, safety, and welfare of the public or of**
20 **riparian owners during flooding?**

1 **A15.** No. Per 10 V.S.A. § 6001(6), a “flood hazard area” is “the land in the flood plain
2 within a community subject to a 1 percent or greater chance of flooding in any given year” (44
3 CFR § 59.1), where a one percent chance of flooding is synonymous with the 100-year
4 floodplain. VELCO considered the proposed line rebuild, specifically the structure
5 replacements, with respect to both flood inundation and fluvial erosion hazards pursuant to the
6 Flood Hazard Area and River Corridor (“FHARC”, “FHA”, or “RC”) Protection Procedure
7 (ANR 2017). Given the nature of the rebuild project, engineering and design limitations
8 preclude the ability to relocate all structures outside FHARC areas. This structure siting
9 limitation is due, in part, to the fact that the replacement structures need to be closely co-located
10 adjacent to the existing structure, which mitigates the potential that the inside phase (conductor)
11 from one line could potentially make contact with an adjacent mid-span structure from the phase
12 blowing out to the side. However, in accordance with the FHARC Procedure and VELCO’s own
13 internal processes as outlined in the VEGM, VELCO sited replacement structures to minimize or
14 avoid FHAs and RCs areas wherever possible. Where replacement structures could not be
15 reasonably shifted entirely outside of FHAs or RCs, VELCO worked with its line design
16 engineer to shift structures further away from the watercourse than the existing structure. At one
17 angle structure location (264), however, the replacement structure is marginally closer to the
18 adjacent watercourse than the existing structure to be replaced, which is due to design and ROW
19 constraints associated with angle structures. VELCO met with the VT DEC Rivers Program to
20 review and discuss this structure and its replacement location proximate to the Mill River, which
21 VELCO will include within the Project’s FHARC permit. VELCO will work with its line design

1 engineer to implement structure-hardening measures at this location to mitigate fluvial erosion
2 hazard risks. See Exhibit Petitioner AM-2, at 11-12.

3 Where VELCO proposes new permanent cut/fill access roads for safe and continued
4 equipment access during the Project and future line maintenance within a FHA or RC, the access
5 will be constructed by box-cutting and backfilling with imported material so as not to change the
6 existing flood storage capacity, or lateral mobility of the watercourse. VELCO has minimized
7 these proposed impacts to FHARCs where possible through the implementation of temporary
8 mat bridges and forgoing continuous access in several locations along the ROW. Following
9 VHB’s detailed Base Flood Elevation (“BFE”) modeling for the FCLU Project structure
10 evaluations, the extent of potential FHARC impacts reduced significantly, as the georeferenced
11 FEMA-mapped floodplain data used initially to guide Project siting considerations covered much
12 larger areas of the landscape than the detailed, GIS-modeled BFE areas. VHB’s BFE modeling
13 accounts for the contributing drainage areas and a much more accurate, LiDAR-derived
14 representation of the ground surface elevations relative to the waterbody. As such, VELCO has
15 relied upon VHB’s current, site-specific BFE information for its structure replacement and
16 access road siting considerations in the area of Structures 233, 241-252, 265, and 334-335. In
17 order to avoid a net reduction of flood storage capacity, VELCO will transport overburden box-
18 cut materials from access construction activities within FHARCs to an adjacent upland area for
19 permanent stabilization in accordance with the Project’s permit conditions and the VEGM.

20 Based on the aforementioned BFE dataset, there are six (6) replacement structures
21 located in a FHA (241, 242, 243, 412, 413, and 414). Each pole, however, represents less than 2-
22 3 cubic yards of fill and constitutes an insignificant amount of fill or obstruction. These poles

1 would not have any measurable effect on the flood flow obstruction or flood storage capacity,
2 and therefore would not measurably or adversely affect or endanger the health, safety, and
3 welfare of the public or riparian owners during flooding. Replacement structures that VELCO
4 cannot reasonably shift outside of floodplains and/or river corridors will be reviewed as part of
5 the final line design for structure hardening design measures. These structure hardening design
6 measures could include deeper pole embedments; more robust pole hole sleeves with higher
7 reveals; and where guy anchors are utilized, use of more robust anchor types, with increased
8 depths, placed as far from the expected areas of high water flow as possible. These structure
9 design measures will be incorporated in the FHARC permit application materials, where
10 applicable.

11 When evaluating the existing K42 Line structures for possible FHARC avoidance
12 initially, VELCO determined that 33 structures were within the FEMA-mapped 100-year
13 floodplain. For reference purposes, when reviewing the proposed line design against the site-
14 specific BFE modeling as opposed to the superseded georeferenced FEMA floodplain data, there
15 are only 13 proposed replacement structures in FHAs (site-specific BFE modeling has showed
16 that, as proposed, replacement structures 233, 246, 247, 248, 249, 250, and 251 are not actually
17 in a FHA).

18 Through design, avoidance, and minimization, the Project will obtain permit approval
19 under the FHARC Rule, and as such, will not restrict or divert the flow of floodwaters, and will
20 not increase the peak discharge of the watercourse.

Streams [10 V.S.A. § 6086(a)(1)(E)]

1 **Q16. Will the Project have an undue adverse effect on streams?**

2 **A16.** No. VELCO retained VHB to delineate and map perennial and intermittent
3 streams and characterize their physical and natural conditions during comprehensive field
4 surveys performed in 2022 and 2023 throughout the Project Assessment Area (“PAA”) (also
5 referred to as the Project Study Area). Stream surveys were conducted using the following
6 definition of a stream, as contained in the VEGM: “*A watercourse that flows water by gravity for*
7 *at least a portion of the year, through a natural channel created from concentrated flow,*
8 *containing a clearly identifiable streambed and banks, where the streambed is unvegetated due*
9 *to regular inundation and the bank slopes confine normal flows of the active channel.*” See
10 Exhibit AM-6, at 6.

11 VHB also utilized the USACE definitions for perennial, intermittent and ephemeral
12 streams (USACE, 2012) and the presence/absence of an Ordinary High Water Mark (“OHWM”)
13 (USACE, 2005) during stream delineations. VHB’s stream delineation flagging and data
14 collection also applied the VT ANR Riparian Buffer Guidance’s Top of Bank (“TOB”) and Top
15 of Slope (“TOS”) characteristics where appropriate, such as with larger stream channels (VT
16 ANR 2005). See Exhibit AM-2, at 12.

17 In total, VHB identified and mapped 14 perennial streams, 6 intermittent streams, 1
18 intermittent/ephemeral feature, 1 ephemeral stream, and 15 ditches. Of note, the K42 Line
19 crosses five different named stream features, including the Missisquoi River, Mill River, Stevens
20 Brook, Stone Bridge Brook, and Hungerford Brook. See Exhibit Petitioner AM-2, at 12-13.

1 Construction activities that could affect stream resources include the limited ground
2 disturbance associated with the construction of structure work pads, access roads, and the
3 conductor stringing process, which requires that the area beneath the wire zone be free of
4 obstructions in addition to temporary guard structure installations to protect underlying features
5 (e.g., roads and distribution line crossings). Following completion of the K42 Line rebuild,
6 stream crossings and their associated riparian buffers will remain largely unchanged from current
7 condition within the ROW as natural regeneration of herbaceous vegetation, woody shrubs and
8 compatible tree species will be allowed in accordance with VELCO TVMP. Accordingly, there
9 will be no undue adverse impact to streams or riparian buffers as a result of the Project. Post
10 construction, vegetation within riparian buffers will continue to be maintained in accordance
11 with VELCO's TVMP to promote the dominance of compatible species (species that mature at
12 heights less than 12 feet), which includes herbaceous plants and shrubs, and some low growing
13 tree species.

14 To minimize stream and riparian buffer impacts, VELCO employs a conservative design
15 approach to protecting streams and managing riparian buffers by locating the necessary
16 construction activities and Project elements to avoid impacts to these resources, wherever
17 possible, summarized as follows:

- 18 • Minimizing the potential for hydrologic change within the sub-watershed;
- 19 • Ensuring the integrity of and stabilizing steep slopes in the PAA;
- 20 • Limiting construction activity within streams and riparian buffers to the maximum
21 extent practicable; and

- 1 • Performing crossings of streams in accordance with the VEGM and any necessary
2 permit authorizations.

3 VELCO sited replacement structures outside of streams and avoided riparian buffers with
4 the overall Project design where feasible, such as avoidance of access road construction through
5 Hungerford Brook and Mill River in Georgia. By avoiding locating pole replacements in
6 regulated streams, the structure replacements will not affect the physical attributes of the
7 watercourses, streambed substrate, banks, or fish habitat. VELCO has assessed design options
8 for locating structure replacements as far from stream banks as feasible to protect transmission
9 infrastructure, minimize potential stream impacts, and maintain an appropriate riparian buffer for
10 all streams.

11 Where stream crossings are unavoidable to support construction along the K42 Line,
12 VELCO will accomplish access across streams with the use of temporary construction mat
13 bridges or new permanent stream crossings for streams without existing culverts. VELCO will
14 employ temporary timber mat or prefabricated bridges for construction access across all
15 delineated, named streams where an access road is proposed to cross these features. As detailed
16 in the VEGM Streams section and associated details sheets, temporary mat bridges will span
17 bank-full width to minimize streambed disturbance, protect the banks, and provide adequate
18 clearance for water flow.

19 There are several existing culverted crossings along established access routes VELCO
20 will utilize to support construction of the proposed Project. To maintain water quality and
21 facilitate the safe and efficient access by construction equipment, existing culverts which may
22 have been plugged or failed or otherwise need repair, will be replaced or upgraded along existing

1 access routes to promote hydrologic connectivity and aquatic organism passage and to prevent
2 bank erosion, sedimentation, or inadvertent failure. More specifically, VELCO plans to install
3 three new culverts and one replacement culvert at intermittent stream features. See Exhibit
4 Petitioner AM-2, at 13. Culvert design and installation will follow guidance outlined in the
5 VEGM and Guidelines for the Design of Stream/Road Crossings for Passage of Aquatic
6 Organisms in Vermont (2009). These crossings and associated structures will be included with
7 the Project's Section 404 permit application administered by the USACE. The Project will also
8 meet Vermont Water Quality Standards and seek the necessary approval under a Vermont
9 Section 401 Water Quality Certification.

10 Based on review and consultation with VHB, VELCO does not anticipate the need for a
11 VT Stream Alteration Permit for the Project, as no new permanent crossing structures will
12 involve 10 or more cubic yards of fill in any perennial stream. VELCO will also seek a Flood
13 Hazard Area and River Corridor Permit for the limited, unavoidable impacts to those resources
14 as described in the Floodplains section.

15 With a conservative design approach (e.g., avoidance of sensitive resources to the extent
16 practicable), BMP implementation, site-specific erosion control measures, and adherence to the
17 VEGM and all necessary permit conditions, the construction of the Project will minimize
18 impacts to the natural conditions of the streams, and will not endanger the health, safety, or
19 welfare of the public or adjoining landowners. The proposed Project will therefore have no
20 undue, adverse effects on stream resources.

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

1 **Q17. Does the Project affect any shorelines?**

2 **A17.** No. Shoreline boundaries include the land between the mean high water and low
3 water mark of ponds, lakes, and applicable rivers (10 V.S.A § 6001(17)). Act 250 defines a
4 Shoreline as “the land adjacent to the waters of lakes, ponds, reservoirs and rivers.” Act 250
5 criterion (1)(F) is intended to, insofar as possible and reasonable in light of the purpose of the
6 proposed Project:

7 (i) retain the shoreline and the waters in their natural condition;

8 (ii) allow continued access to the waters and the recreational opportunities provided
9 by the waters;

10 (iii) retain or provide vegetation which will screen the development or subdivision
11 from the waters; and

12 (iv) stabilize the bank from erosion, as necessary with vegetation cover.

13 VHB identified one river to have a protected shoreline within the PAA. As stated in the
14 Natural Resource Report by VHB, “the shoreline associated with the Missisquoi River will
15 remain in its current condition as the Project will use an existing and maintained ROW.” Exhibit
16 Petitioner AM-2, at 14. The K42 Line crosses the Missisquoi River at structure span 415-416,
17 which is located on the northern end of the PAA and will require federal approval under Section
18 10 of the Rivers and Harbors Act for the line’s aerial crossing component. No lakes, reservoirs,
19 or large, permanent ponds that would have protected shorelines were identified by VHB within
20 the PAA. No Project related earth disturbance is proposed along the banks of the Missisquoi
21 River and VELCO will continue to manage shoreline vegetation in the ROW in accordance with

1 VELCO’s TVMP. The applicable protection measures outlined in the VEGM, Project-specific
2 erosion prevention and sediment control (“EPSC”) Plan, and associated state and federal permit
3 authorizations will ensure that the Project will, insofar as possible: retain shorelines and waters
4 in their natural condition, allow continued access to the waters and the recreational opportunities
5 provided by the waters, retain or provide compatible vegetation that will screen the Project from
6 the waters, and stabilize the bank from erosion as necessary with vegetation cover. As such, the
7 Project will not affect the pre-existing condition of any shoreline resources, and the Project will
8 not have an undue, adverse impact on shorelines.

Wetlands [10 V.S.A. § 6086(a)(1)(G)]

9 **Q18. Will the Project result in undue, adverse effects to wetlands?**

10 **A18.** No. VELCO retained VHB to conduct comprehensive field surveys and delineate
11 jurisdictional wetlands in the PAA. All wetland surveys were performed pursuant to the criteria
12 in the Vermont Wetland Rules and based on the following definition: “those areas of the State
13 that are inundated by surface or groundwater with a frequency sufficient to support significant
14 vegetation or aquatic life that depend on saturated or seasonally saturated soil conditions for
15 growth or reproduction” (10 V.S.A. § 902). VHB delineated wetlands for the Project using the
16 delineation methodology prescribed in the Vermont Wetland Rules, which is enumerated in the
17 U.S. Army Corps of Engineers Wetland Delineation Manual (1987), and the Regional
18 Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast
19 Region (Version 2.0) (2012).

1 The Vermont Wetland Rules define Class I Wetlands as exceptional or irreplaceable in
2 their contribution to Vermont’s natural heritage, and therefore merit the highest level of
3 protection for the wetland and a 100-foot buffer zone.

4 There are no Class I wetlands in the PAA. Class II Wetlands are wetlands identified on
5 the Vermont Significant Wetlands Inventory (“VSWI”) maps, or those the Secretary of the VT
6 ANR determines merit protection, based on an evaluation of the functions and values set forth in
7 Section 5 of the Vermont Wetland Rules. In accordance with the Vermont Wetland Rules,
8 certain wetlands are presumed to be Class II wetlands, unless determined otherwise by
9 performing an onsite evaluation of wetland functions.

10 VHB delineated 86 wetland features within the PAA, which VHB further describes and
11 enumerates in the FCLU Project Natural Resource Report, Exhibit Petitioner AM-2, at 15. In
12 October 2022 VELCO, VHB, USACE, and VT ANR staff met and reviewed the FCLU wetland
13 delineations and proposed classifications during a site visit in the field. Of the 86 delineated
14 wetland features, the site visit confirmed 56 as Class II wetlands that are subject to both VT
15 ANR and USACE jurisdiction. The remaining 30 delineated wetlands within the PAA are Class
16 III wetlands only subject to USACE jurisdiction.

17 Proposed construction activities within and near wetland resources will involve
18 temporary and permanent access route construction, and limited ground disturbance associated
19 with the transmission line replacements’ work pads and wire pulling sites. VELCO does not
20 propose any regulated forested wetland clearing along the K42 Line, since work will generally
21 be concentrated within the existing transmission line corridor; however, limited trimming and
22 some select tree removal is necessary along the edge of the existing ROW, which includes some

1 wetland areas. Some small tree and sapling removal is also necessary along off-ROW access
2 routes in wetlands or regulated wetland buffers to support equipment and material access during
3 construction and to minimize permanent direct impacts to wetlands. VELCO will identify
4 specific regulated wetland impact areas, including proposed tree clearing, as part of the state and
5 federal wetland permitting effort for the Project, which VELCO anticipates filing for in fall
6 2023.

7 VELCO reviewed the VHB wetland delineation data and the existing K42 structure
8 locations and, where feasible, shifted the replacement structures to avoid or minimize potential
9 impacts to wetland resources. Specifically, VELCO has designed K42 Line rebuild structures
10 219, 243, 246, 269, 295, 335, 378, and 412 to minimize Project impacts on wetland resources by
11 shifting these outside the wetland. Two of the proposed replacement structures, however,
12 structures 361 and 411, are to be located in wetlands. Existing K42 Structure 361 is located
13 directly on the western edge of delineated wetland “SW-9” in the town of Swanton, whereby the
14 FCLU Project design results its replacement position along the wetland edge. Structure 411
15 required a notable shift to the north to avoid siting the replacement structure within a stream
16 resource and/or its steep erodible banks. These structure replacements and their associated
17 wetland impacts will be included in the Project’s VTDEC and USACE wetland permit
18 applications, as applicable.

19 VELCO has avoided siting Project activities within wetlands wherever feasible. Where
20 complete avoidance is not achievable, VELCO is proposing to avoid permanent impacts to
21 wetlands, wherever practicable, through the deployment of temporary timber matting during
22 construction. Where VELCO is seeking permit authorization for permanent impacts to wetlands

1 for its proposed access, and in one case a work pad, proposed impacts have been minimized to
2 the greatest extent possible with respect to wetlands and their associated functions and values.

3 For access roads, this oftentimes equates to crossing the wetland feature at its narrowest
4 point in the ROW. As noted above, one structure replacement (structure 410), will require
5 unavoidable permanent wetland impacts for its work pad construction because the area consists
6 of a steep side slope with a seep wetland component. VELCO reviewed this location with VT
7 DEC during the site visit; will minimize its proposed permanent impacts to the extent
8 practicable; and will include it within its VT DEC and USACE wetland permit applications.
9 VELCO will seek the necessary approval from the USACE under the authority of Section 404 of
10 the Clean Water Act for its proposed approximately 1.12 acres of permanent impacts to waters of
11 the US (including wetlands). In addition, VELCO will obtain a VT State Wetlands Permit from
12 the VT DEC for its proposed approximately 0.98 acres of permanent impacts to Class II wetlands
13 and 3.4 acres of permanent impacts to Class II wetland buffers.

14 VHB identified and confirmed one vernal pool identified as VP-2023-1/2022-HI-1000,
15 located adjacent to Structure 400 in the spring of 2023, which followed the initial identification
16 of four potential vernal pools (PVPs) during the initial natural resource survey effort in 2022.
17 Upon further evaluation of the PVPs in the spring of 2023, VHB concluded that the other three
18 pools were not isolated nor located within a forested setting and thus not Vernal Pools by
19 definition. See Exhibit Petitioner AM-2, at 16.

20 VELCO will avoid direct impacts to VP-2023-1 and mitigate indirect impacts to the
21 pool and associated vernal pool amphibians to the greatest extent possible. As the confirmed
22 Vernal Pool is located along the eastern edge of the K42 ROW, some unavoidable vegetation

1 management, structure replacement, and work pad establishment will be necessary within its
2 100-foot buffer, which covers much of the ROW at structure 400. To ensure its protection, the
3 vernal pool and its buffer will be marked with high visibility fencing and “Sensitive Resource
4 Area” signage during Project construction. Furthermore, as with all sensitive resources on the
5 Project, VELCO will note the Vernal Pool on its construction compliance plans to communicate
6 the avoidance and protection measures to work crews as part of training and work planning
7 during construction. The Vermont Fish & Wildlife Department (VTFWD) notified VELCO of a
8 potential vernal pool (PVP) located outside the PAA that VHB was not able to access for field
9 assessment purposes. However, VELCO will incorporate the associated geospatial data provided
10 by VTFWD on the construction compliance plans and will implement the same protections as for
11 VP-2023-1 for its 100-foot buffer where it extends into the Project area (ROW). As specified by
12 VHB in the FCLU Project Natural Resource Report, VELCO will avoid impacts to breeding
13 amphibians within the 100-foot buffer during Project construction by:

- 14 • Conducting vegetation and tree work during the amphibian migration and breeding
15 season by hand (between mid-April and late-May);
- 16 • Creating microhabitat for migrating amphibians by leaving some cut vegetation in place
17 within and adjacent to the Vernal Pool buffer;
- 18 • Minimizing excessive amounts of slash left in place by depositing some material outside
19 the buffer area, as needed;
- 20 • Not blasting for rock removal within the 100-foot vernal pool buffer;
- 21 • Installing an exclusionary barrier around on-going construction activities within the 100-
22 foot vernal pool buffer during the migration and breeding season; and

- 1 • Conducting amphibian sweeps by a trained environmental inspector prior to construction
2 crews entering the vernal pool buffer during the migration and breeding season (between
3 mid-April and late-May).

4 Exhibit Petitioner AM-2, at 16.

5 As with other recent projects, VELCO will perform the necessary mitigation for the
6 Project's proposed permanent wetland impacts as part of the wetland permitting process with
7 USACE and VT DEC, which, along with the above-mentioned avoidance and minimization, will
8 likely include an in lieu fee payment administered by Ducks Unlimited for USACE. As such,
9 VELCO will avoid or mitigate significant adverse impacts to wetland functions and values
10 through its design of the Project and permit-specific compensatory mitigation. In addition,
11 implementation and maintenance of erosion prevention and sediment control practices up
12 gradient of wetland resources (as described in the VEGM and the Project-specific EPSC Plan to
13 be developed as part of an INDC permit application) will ensure protection of wetlands and
14 associated water quality during construction. Therefore, the Project will not result in undue,
15 adverse effects to wetlands.

16

Soil Erosion [10 V.S.A. § 6086(a)(4)]

17 **Q19. Will the Project result in undue, adverse effects on soil erosion?**

18 **A19.** No. The proposed Project will require VT DEC Construction Stormwater
19 Discharge Permit coverage for the K42 Line replacement, because construction activities will
20 involve more than one acre of earth disturbance. Consequently, VELCO will perform all earth-
21 disturbing activities in accordance with a site-specific EPSC plan, the conditions as set forth in

1 an Individual Construction Stormwater Discharge Permit, the Vermont Standards and
2 Specifications for Erosion Prevention and Sediment Control, and the VEGM. With the
3 adherence to these conditions and BMP's, the proposed construction activities will not cause
4 undue adverse effects on soil erosion, or cause a reduction in the capacity of the land to hold
5 water from the Project.

6

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

7 **Q20. Will the Project have an undue adverse effect on rare and irreplaceable**
8 **natural areas, necessary wildlife habitat, or threatened or endangered species?**

9 **A20.** No. VHB performed comprehensive assessments of Rare and Irreplaceable
10 Natural Areas (“RINA”), Necessary Wildlife Habitat, and Rare, Threatened and Endangered
11 (“RTE”) Species along the K42 Line in 2022 and 2023. While VHB identified various natural
12 community types in the areas surrounding the PAA during database reviews and noted some
13 natural community characteristics in the forested areas at the margin of the PAA, VHB observed
14 and mapped only one natural community occurrence within the PAA during field surveys. The
15 natural community within the PAA associated with the K42 Line corridor located along the
16 Missisquoi River - a riverside outcrop (State rarity ranking *S3, Uncommon*) - has been avoided
17 with the Project design. The Missisquoi River and the associated riverside outcrops along its
18 banks will remain largely the same following the proposed transmission line replacement that
19 aerially span this natural community. As the identified natural community will not be impacted,
20 no impacts to RINA will occur as a result of the Project.

1 VHB also assessed the Project area for necessary wildlife habitat (“NWH”). State
2 mapped Deer Wintering Areas (DWA) were confirmed during field surveys along two sections
3 of the K42 Line, which consist of the forested lands outside the transmission line corridor
4 proximate to structure spans 394 through 408 and structures 234 through 236. However, no
5 corridor expansion is proposed so the Project will not result in any direct impacts to DWAs.
6 VELCO considers routine vegetation management in the ROW and danger tree removal along
7 the edge of the existing ROW planned to occur coincident with the Project’s construction phase
8 to not constitute DWA impacts, which VTFWD confirmed in a Project consultation meeting on
9 June 21, 2022. Based on a conservative estimate and best available information, VELCO has
10 calculated the amount of clearing proximate to mapped DWAs along the edge of the K42 Line
11 ROW as being less than one percent (0.6%) of the mapped DWAs. The limited construction-
12 related noise will not have undue adverse effects on deer that may winter in the vicinity. Linear
13 project construction occurs sequentially and thus construction phase disturbance is temporal in
14 nature. When/if construction activities occur proximate to DWA during the winter months under
15 snow-covered ground conditions when deer are most vulnerable to potential indirect impacts
16 from construction related noise, these impacts are anticipated to be minimal. As described by
17 VHB, VELCO expects that deer will relocate to portions of mapped DWA with forested cover
18 and browse adjacent to and outside of the ROW and associated Project work areas during the
19 noise producing, intermittent periods of line construction activities. Exhibit Petitioner AM-2, at
20 20. Vegetation Management crews may spend a day or two in the area with several days or
21 weeks before access construction crews enter the area. Similarly, line construction crews will be
22 staggered by days or weeks behind the access crews in order to avoid potentially unsafe

1 congestion in the ROW and mitigate scheduling pitfalls of one crew/activity potentially holding
2 up the other. As such, VELCO anticipates that potential indirect impacts from construction
3 equipment operation will occur for a relatively short period and thus not be a significant indirect
4 impact to deer using the DWA mapped adjacent to the K42 ROW.

5 VHB identified and confirmed one area as grassland bird habitat on the K42 Line ROW
6 between structure span 224 – 230, which VTFWD considers NWH. This area was subject to
7 targeted grassland bird surveys during the appropriate survey period of June. The two-day
8 survey effort confirmed that grassland bird species were present. As the proposed Project
9 consists of rebuilding an existing high voltage overhead transmission line, the underlying land
10 use will not change as a result of the Project. Proposed Project related activities in this area
11 consist of overland access and limited cut / fill pads. The proposed cut / fill work pads will only
12 require grading for the hedgerow that runs parallel to the transmission line corridor. Otherwise,
13 the pads are all positioned on level terrain and actual earth disturbing activities and grading will
14 be minimal. As the proposed grading for the work pads in the area are intended to address the
15 hedgerow's rocky material that is coincident with structure placements and a property and fence
16 line, VELCO will re-establish the area to pre-construction conditions during final restoration
17 activities. As both the access and work pad construction methodologies within the area of
18 grassland bird habitat are temporary unavoidable impacts, VELCO will seek to mitigate impacts
19 through mitigation payment into the Bobolink Fund for the duration of the Project's construction
20 phase. See Exhibit Petitioner AM-2, at 20.

1 As the Project has been designed to avoid permanent impacts to NWH and will mitigate
2 the approximately 9.8 acres of unavoidable temporary impacts to grassland bird habitat, the
3 Project will not destroy or significantly imperil NWH.

4 VHB's RTE assessment included a desktop review, habitat assessment and field
5 reconnaissance of the PAA. As part of the informed, targeted field surveys, VHB identified and
6 mapped five different plant species occurring along the K42 Line. Exhibit Petitioner AM-2, at
7 21-22. One State Threatened plant species, Houghton's flatsedge, was mapped proximate to an
8 existing structure and associated guy anchors. As this structure is slated for replacement, along
9 with the guy anchors, VELCO will seek a Vermont Takings Permit for the unavoidable impacts
10 to the Houghton's flatsedge plant population. For the other mapped RTE plant populations,
11 VELCO will adhere to the protection measures as outlined in the VEGM and noted in Exhibit
12 Petitioner AM-2, at page 22, which generally includes contractor training, signage, barricade
13 flagging, and including the population location on project plans for avoidance purposes. In
14 addition, VELCO will implement its NNIS Monitoring and Control Plan for the Project to limit
15 the potential spread of invasive plants that could hinder the ongoing success of RTE plant
16 species.

17 RTE animal species known to occur proximate to the PAA include several aquatic
18 organisms; however, VELCO has designed the Project to avoid impacts to the associated
19 watercourses, and as such, VHB did not recommend any further surveys or specific mitigation
20 since the species and their habitat will be avoided. Of the terrestrial RTE animal species known
21 to occur proximate to the Project Area (grasshopper sparrow, vesper sparrow, and eastern
22 meadowlark), none overlap the PAA. Grassland bird habitat surveys confirmed suitable habitat

1 and obligate species during field surveys along the K42 line corridor, which included
2 observations of Eastern Meadowlark (S2B, State Rare / imperiled) outside the PAA. The
3 grassland bird habitat area where Eastern meadowlark was observed nearby is proposed for
4 overland travel (with the exception of limited grading within a hedgerow for rocky debris
5 management near pole installations). If necessary, VELCO will maintain a mowed area
6 matching the access route and crane pads to preclude grassland birds from nesting within work
7 areas. VELCO will avoid potential take of Eastern meadowlark observed by VHB during
8 targeted surveys outside the PAA by establishing its work areas (access routes and crane pads)
9 outside of the nesting season of May 1 to July 31. Once access roads and work pads are
10 established via mowing, the habitat will be temporarily unsuitable for this listed species during
11 the construction phase of the Project whereby potential take is not anticipated. See Exhibit
12 Petitioner AM-2, at 24.

13 The US Fish and Wildlife Service has not designated any critical habitat for the federally
14 threatened and VT endangered Northern long-eared bat, although the species' summer range
15 does occur within the Project area. Because there are no known occurrences of the species or
16 hibernacula proximate to the Project and the Project will impact less than one percent of suitable
17 forested habitat within one mile, no additional conservation measures are required for Northern
18 long-eared bat. Exhibit Petitioner AM-2, at 22-23.

19 As such, the Project will not destroy or significantly imperil any RTE species.

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

1 **Q21. Will the proposed VELCO work or Project have any significant greenhouse**
2 **gas impacts?**

3 **A21.** No. VELCO’s proposed construction activities will result in the release of air
4 emissions associated with the normal operation of gasoline and diesel-powered engines and
5 equipment. These primarily construction phase activities will be limited in nature and duration.
6 Operation of the K42 Line will not generate sustained greenhouse gas emissions as part of its
7 normal operation, other than periodic maintenance-related vehicle emissions. As such, the
8 proposed transmission line rebuild Project will not produce significant greenhouse gas emissions.

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

9 **Q22. Will the Project work use natural resources?**

10 **A22.** VELCO will construct the Project while minimizing the use of natural resources.
11 The Project will require the use of a minor amount of natural resources to complete the Project,
12 which will be mainly limited to the use of stone to surface the proposed access routes, and
13 petroleum-based fuels and lubricants for the operation of gasoline and diesel powered vehicles
14 and equipment. As such, there will be no undue adverse use of natural resources.

15

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

16 **Q23. Does the Project have an undue adverse effect on primary agricultural soils**
17 **as defined by 10 V.S.A. § 6001(15)?**

18 **A23.** No. As detailed by VHB in the Natural Resource Report for the Project, the PAA
19 contains a number of soil map units that meet the definition of Primary Agricultural Soils

1 (“PAS”). PAS within the PAA are shown in Appendix B of Exhibit Petitioner AM-2 at 90
2 through 148. The 236.11 acres of mapped PAS within the approximately 400 acre PAA are
3 detailed by soil map unit in the Prime Agricultural Soils Impact Summary table in Exhibit
4 Petitioner AM-2 at 149. Five soil units not identified as PAS located within the PAA are
5 supporting some form of agricultural activities and were thus included in the VHB assessment
6 and analysis for the FLCU Project (Exhibit Petitioner AM-2 at 150). When accounting for these
7 five inclusions, the Project’s adjusted area of PAS is approximately 318.51 acres. When
8 accounting for the approximately 170.7 acres of Class II wetlands and buffers, 18.9 acres of
9 steep slopes (>15%), and approximately 6.1 acres of previously impacted PAS (maintained
10 roads, buildings, etc.) that are coincident with mapped PAS within the PAA, the Project’s
11 adjusted area of actual, viable PAS is approximately 122.9 acres.

12 VELCO has designed the Project to minimize PAS impacts by upgrading an existing
13 transmission line from an H-frame two-pole configuration to a single pole design within the
14 existing corridor, utilizing existing farm roads for its access needs wherever possible, and
15 avoiding permanent loss of PAS through proposed soil management practices.

16 No stumping or grubbing is anticipated as part of planned vegetation management
17 activities and therefore, no PAS-specific management practices are planned for the very limited
18 tree clearing associated with the Project.

19 VELCO has analyzed and quantified the Project’s PAS impact areas into three separate
20 categories, which are: 1) construction phase physical disturbance (temporary), 2) physical
21 disturbance (long-term temporary), and 3) permanent. Due to the dynamic nature of linear
22 project construction limited overland vehicular traffic, temporary matting, staging of materials

1 and equipment, and other minor project activities not likely to impact PAS will occur outside the
2 mapped alignments as depicted in the PAS mapping (Appendix 2 of the VHB Natural Resource
3 Report).

4 Proposed construction phase disturbances to PAS includes overland and matted access
5 routes, structure replacement work pads, and staging areas (e.g. main areas of Project work
6 activities), which VELCO has carefully assessed and selected in active agricultural fields.
7 VELCO has conservatively calculated its total area of construction phase physical disturbance
8 within PAS areas to be approximately 31.2 acres, which includes temporary matting even though
9 matting is specifically used as soil protection measure (incorporated within the calculation and
10 mapping, as some minimal ground disturbance can occur with the use of mats). VELCO may
11 use temporary matting in areas of PAS for access, structure replacement, and wire-pulling
12 activities to facilitate construction activities and protect the underlying PAS.

13 Construction phase disturbance to PAS will likely occur where VELCO proposes
14 overland travel for equipment access and work pads. In areas of construction phase physical
15 disturbance, VELCO will ensure revegetation of these areas during final restoration in
16 accordance with the best management practices for PAS as outlined in the VEGM, which may
17 include post-construction agricultural subsoiling/seed bed preparation, seeding and mulching.
18 These mitigation measures will ensure that construction phase disturbances in PAS areas will
19 only be temporary in nature and will remain viable for future agricultural uses.

20 Where VELCO proposes long-term temporary Physical Disturbance in areas of PAS to
21 install stone roads and cut / fill access roads and work pads, permanent impacts to PAS will be
22 avoided by implementing one of two work practices. Overall, the Project proposes

1 approximately 14.5 acres of physical disturbance to PAS. Where grading activities are necessary
2 to establish safe and efficient access and work areas, VELCO will manage PAS by separating
3 and stockpiling the topsoil horizon onsite for future use either during restoration, or later where
4 specifically requested by the underlying landowner. Alternatively, where stone access road
5 construction does not require cut and fill grading, VELCO proposes no ground disturbance and
6 will maintain a layer of separation from the imported stone road fill from the underlying native
7 soils with a layer of geotextile fabric barrier. This work practice serves to maintain PAS in place
8 and reduces the overall risk of erosion and sedimentation on the Project. While VELCO's access
9 and environmental teams prefer this at-grade stone road construction methodology for its
10 efficacy and EPSC benefits, it is not practicable in all scenarios, such as side hills that require
11 ditching or steep terrain that require cuts and fills to establish a safe and level travel surface for
12 line construction equipment and material transport. As such, VELCO will seek to employ this
13 access construction method in areas of PAS on the FCLU Project wherever terrain and
14 environmental conditions allow to retain the PAS onsite and eliminate soil disturbance and
15 associated erosion risks.

16 The work pads needed for structure replacements and wire pulling will only be graded to
17 the extent necessary to establish a level surface for safe and efficient equipment setup and
18 operation. For areas where VELCO proposes cut / fill work pads and access roads in areas
19 mapped as PAS, the available topsoil horizon will be stripped and windrowed/stockpiled
20 adjacent to the work area for later use. For all areas where access and work pad grading
21 improvements are necessary, topsoil stockpiles will be stabilized with seed and mulch to mitigate
22 soil erosion in accordance with the VEGM and the Project's INDC. VELCO will redeploy

1 stripped topsoil material to provide a suitable seedbed for successful vegetative establishment on
2 disturbed side slopes at cut / fill pads and roads where applicable during construction and/or
3 restoration within PAS areas. Topsoil stockpiles/windrows will not be redeployed atop the travel
4 way of access roads or the level portion of graded work pads in areas of PAS. Windrows of PAS
5 topsoil not redeployed for restoration purposes will be permanently stabilized with a robust cover
6 of herbaceous vegetation and left onsite for future use by the respective landowner.

7 The majority of proposed long-term temporary Physical Disturbances in areas mapped as
8 PAS are in remote areas with challenging access (e.g. few existing public road crossings or off-
9 ROW access points, areas with challenging local topography, and/or where the land is rocky
10 and/or wet). The site-specific factors listed above are used in VELCO's proposed access
11 construction methodology for PAS on the Project, whereby proposed impacts are not anticipated
12 to result in adverse impacts to farming potential. Regardless, VELCO will employ the
13 aforementioned mitigation measures to ensure that the Project will not result in undue, adverse
14 effects to PAS. VELCO is proposing approximately 1 acre of permanent impacts to PAS for two
15 off-ROW access roads, which have been co-located with historic and ongoing access routes in
16 these two locations. VELCO has identified one off-ROW access road in Highgate that crosses
17 an existing, active agricultural field where the installation of stone on fabric along the edge of the
18 field to be collocated with the existing travel route through the field, will help support
19 construction and future maintenance needs. The second off-ROW access road VELCO is
20 proposing permanent impacts to PAS provides access from Cline Road to the K42 Line ROW
21 near structure 257. VELCO selected this existing travel route in the area in place of upgrading a
22 nearby Class 4 road, Horseshoe Barn Rd, which would have resulted in more permanent wetland

1 impacts. Based on landowner negotiations for the Cline Road off-ROW access road alignment,
2 VELCO is proposing this access as a permanent impact to PAS. VELCO will seek mitigation
3 for permanent impacts to PAS for both of these permanent off-ROW access road alignments in
4 consultation with Agency of Agriculture Food and Markets (“AAFM”) through in-lieu fee
5 program payment.

6 Areas of proposed access and work areas, as depicted within Appendix 2 of the VHB
7 Natural Resource Report, are based on the current layout for enumerating physical disturbance
8 within PAS. Minor modifications may occur during Project construction based on field
9 adjustments, work processes, and/or design amendments. Such minor modifications will be
10 limited to lands within the PAA and will be managed in accordance with other Project permits
11 and approvals, as applicable.

12 VELCO will remove all retired and unused material from the ROW as part of the
13 Project’s construction and final restoration phase. Furthermore, VELCO will coordinate the
14 proposed avoidance and minimization strategies for its access and work pad construction with
15 the AAFM. VELCO will coordinate with AAFM and implement appropriate mitigation,
16 particularly if design plans change resulting in more or fewer impacts to PAS. As such, there
17 will be no undue adverse impacts to primary agricultural soils from the Project.

18

19 **Q24. Does this conclude your testimony at this time?**

20 **A24.** Yes, it does.

DECLARATION OF ANDREW MCMILLAN

I declare that the above statements are true and accurate to the best of my knowledge and belief.
I understand that if the above statements are false, I may be subject to sanctions by the
Commission pursuant to 30 V.S.A. § 30.

10/26/23
Date

/s/ Andrew McMillan
Andrew McMillan