STATE OF VERMONT
PUBLIC UTILITY COMMISSION

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 the construction of the New Haven Operations Facility in New Haven, Vermont	))))))	Case No. 19-____-PET

PREFILED TESTIMONY OF JACOB T. REED ON BEHALF OF VELCO

November 15, 2019

Mr. Reed's testimony addresses the Project's potential impacts on natural resources and historic sites under 30 V.S.A. § 248(b)(5).

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[1] A confidential, un-redacted version of the Historic Sites Report (Exhibit Petitioner JTR-3) has been filed under seal with the Public Utility Commission pursuant to a proposed protective order.

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PREFILED TESTIMONY OF
JACOB T. REED
ON BEHALF OF VELCO

1. Introduction

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

A1. My name is Jacob T. Reed. I am the VELCO Environmental Permitting Lead for the New Haven Operations Facility. My business address is 366 Pinnacle Ridge Road, Rutland, Vermont 05701.

Q2. Please describe your educational background, qualifications, and work experience.

A2. I received a Bachelor of Science degree in Architectural Engineering Technology from Vermont Technical College. I started working for VELCO as an intern in 2007 and have been employed fulltime by VELCO since November 2012. I have worked on a variety of environmental projects at VELCO. In my current role as Environmental Permitting Lead for the New Haven Operations Facility, I am responsible for scheduling and managing any necessary natural resource and above- and below-ground historic site assessments; agency coordination and correspondence; environmental permitting; and construction and restoration oversight to ensure compliance with the project's environmental permits and

commitments. Enclosed as **Exhibit Petitioner JTR-1** is my resume, which sets forth my educational and professional experience in more detail.

Q3. Have you previously testified before the Public Utility Commission ("PUC") or in other judicial or administrative proceedings?

A3. Yes. I offered testimony at the PUC in support of VELCO's East Avenue and Queen City Substation Improvement Project in Case 18-5029-PET. I have also led several permitting efforts for VELCO and supported other VELCO staff in the development of their prefiled testimony and exhibits for other projects brought before the PUC, including several associated with the Statewide Radio Project. And I have prepared several Act 250 land use permit applications for VELCO that addressed the criteria contained in 10 V.S.A. § 6086.

Q4. What is the purpose of your testimony?

A4. My testimony provides an assessment of potential impacts upon above- and below-ground historic sites and natural resources relating to construction and operation of VELCO's proposed New Haven Operations Facility as described in Mr. Lind's prefiled testimony (the "Project" or "Facility") based on the results of several reports and plans that evaluate the Project's impacts. I also describe which environmental permits will be required to proceed with Project construction.

Specifically, my testimony will address the following statutory criteria: historic sites (30 V.S.A. § 248(5)), natural environment (30 V.S.A. § 248(5)),outstanding resource waters

(10 V.S.A. § 1424a(d)), water and air pollution (10 V.S.A. § 6086(a)(1)), headwaters, (10 V.S.A. § 6068(a)(1)(A)), waste disposal (10 V.S.A. § 6086(a)(1)(B)), water conservation (10 V.S.A. § 6086(a)(1)(C)), water supply (10 V.S.A. § 61086(a)(2) and (3)), floodways (10 V.S.A. § 6086(a)(1)(E)), streams (10 V.S.A. § 6086(a)(1)(E)), shorelines (10 V.S.A. § 6086(a)(1)(F)), wetlands (10 V.S.A. § 6086(a)(1)(G)), soil erosion (10 V.S.A. § 6086(a)(4)), threatened and endangered species, rare and irreplaceable natural areas and necessary wildlife habitat (10 V.S.A. § 6086(a)(8)), greenhouse gas impacts (30 V.S.A. § 248(5)), use of natural resources (30 V.S.A. § 248(5)), and primary agricultural soils (30 V.S.A. § 248(5)).

Q5. Please describe the work you have done for this Project.

A5. I oversaw the Natural Resource Assessment performed by VELCO's environmental consultant, Stantec, which included a desktop review of publicly-available environmental data, and a detailed field assessment of the Project survey area. Based on this analysis, Stantec developed a Natural Resources Report which describes the survey area, methodologies and results, offered as **Exhibit Petitioner JTR-2**. I also oversaw the evaluation of potential impacts on historic sites conducted by Louis Berger U.S., Inc., a WSP company ("WSP"), which is set forth in a Historic Sites Report provided as **Exhibit Petitioner JTR-3**. Confidential information regarding the location of archeological sites has been redacted from the Historic Sites Report in accordance with Vermont law; the unredacted version of the report has been filed under seal with the Commission pursuant to a proposed protective order.

Q6. Please explain the degree to which distribution improvements associated with the Project were evaluated for environmental impacts, and identify the source of the review.

A6. As described in the prefiled testimony of Mr. Lind, the Project will require upgrading the existing single-phase electric distribution lines to provide two independent three-phase power sources to the Project (the "Distribution Improvements"). The preliminary location of the Distribution Improvements is depicted in **Exhibit Petitioner PWL-4**.

Green Mountain Power Corporation ("GMP") has agreed to be responsible for obtaining any necessary permits beyond the Project's CPG and installing the Distribution Improvements. GMP will be conducting necessary resource reviews associated with these Distribution Upgrades. The design of the Distribution Improvements are not yet final, however it is expected that it will involve in-kind pole replacements, guy wire installations, and re-spanning of some sections of distribution line to support the single-phase to three-phase upgrade. Additionally, it is expected that each pole will require the addition of a crossarm to support the additional wires. The lines to be upgraded are generally within or adjacent to the VTrans Rights-of-way for Route 7 and Route 17, and as such the majority of the work is expected to be completed from the road surface.

The Distribution Improvements will be conducted in accordance with the VELCO Environmental Guidance Manual ("VEGM") (**Exhibit Petitioner JTR-5**); *The Vermont Standards and Specifications for Erosion Prevention & Sediment Control*; the Vermont Wetland Rules (e.g., Allowed Uses 6.08 and 6.22); the U.S. Army Corps of Engineer's

Vermont General Permit 6-Utility Line Activities; the Best Management Practices Associated with the Use of Pentachlorophenol-Treated Utility Poles as established in Docket 8310 ("Penta BMPs"), as well as any other applicable state and federal regulatory requirements.

2. <u>Historic Sites [30 V.S.A. § 248(b)(5)]</u>

Q7. Will this Project have an undue adverse effect on historic sites?

A7. No. A "historic site" is a site that has been officially included in the National Register of Historic Places ("NRHP") and/or the Vermont State Register of Historic Places. VELCO retained WSP to perform an Archaeological Resource Assessment ("ARA") and follow-up Phase 1B Archaeology Survey, as well as a Historical Architectural Resource Investigation to determine the proposed Project area's sensitivity for archaeological and historic resources. WSP's complete analysis and findings are included in the Historic Sites Report (**Exhibit Petitioner JTR-3**).

WSP determined that there are three previously identified precontact archeological sites (AD-448, AD-460 and AD-1471) within the Project area. WSP concluded that Site AD-448 consisted of a single projectile point, and it was classified as an isolated find. Attempts to relocate previously identified Site VT-AD-1471 were unsuccessful, and therefore confirmed a prior assessment that the site is not eligible for inclusion in the NRHP. Previously identified Site VT-AD-460 was relocated within its previously recorded boundaries. WSP conducted a subsurface investigation along the northern

boundary of the site where Project activities are proposed as depicted in Figure 5a within **Exhibit Petitioner JTR-3**. It is WSP's opinion that the portion of Site VT-AD-460 located within the Project's design would not contribute to NRHP eligibility under so-called Criterion D. WSP's opinion is that further archaeological testing in this portion of the site would not yield additional data, and therefore recommends the proposed Project design as not adversely affecting this portion of Site VT-AD-460.

WSP conducted an Architectural Reconnaissance Survey of the Project Area of Potential Effect ("APE") extending one quarter mile from the Project site. The survey included a review of any previously documented State/Federal Registered Historic Properties as well as a field survey to capture any properties not previously surveyed that would be eligible for listing. WSP concluded that there were no properties listed or eligible for listing within the 0.25 mile APE. One property, which is just outside a 0.25-mile radius of the Project area, is listed in the Vermont State Register of Historic Places and is recommended as eligible for listing in the NRHP.

To maintain the rural landscape setting of the locale and to blend in with nearby building types, VELCO has designed the Project building to resemble an agricultural structure such as a barn. In addition, screening plantings are proposed to limit any further impact to the local viewshed. These efforts are intended to have beneficial effects as they will limit the view of the Project. Because of the aforementioned design considerations,

distance, intervening vegetation, and the location on the landscape, construction of the Project is anticipated to have no adverse effect on the register-eligible property.

For the reasons summarized above, and as further detailed in the Historic Sites Report submitted as **Exhibit Petitioner JTR-3**, the Project will not have an undue adverse effect on historic sites.

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

Q8. Will the proposed Project have an undue adverse effect on the applicable Section 248 environmental criteria or the natural environment?

A8. No. VELCO retained Stantec to perform detailed natural resource assessments within the area of the proposed Project and all support locations for the Project, including utility work areas, access, and potential staging areas that may be used to support Project construction. These areas are collectively referred to as the "Project Study Area" or "Study Area." See **Exhibit Petitioner JTR-2**. VELCO has considered the surrounding natural resources in the siting and design of the proposed Project, and has reduced impacts to the greatest extent possible. VELCO's approach to avoidance, minimization, and mitigation of potential impacts to specific Section 248 criteria is discussed individually below. However, generally, VELCO has limited the vegetation clearing necessary for the Project to the two east-to-west tree lines that separate agricultural fields in the Project Study Area. These existing trees a generally depicted in the Land

Mitigation Plan included as Appendix C to the Aesthetic Analysis Report offered as **Exhibit Petitioner MJB-2**.

VELCO will also perform all Project work in accordance with the well-established best management practices outlined in the VEGM (**Exhibit Petitioner JTR-5**) and the site specific Non-native and Invasive Species (NNIS) Monitoring and Control Plan, which is included as **Exhibit Petitioner JTR-4.** As such, the Project will not result in any undue, adverse effects on the natural environment.

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

Q9. Will the Project result in an undue adverse effect on any Outstanding Resource Waters?

A9. No. There are no Outstanding Resource Waters within or in the Project's vicinity.

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

Q10. Will the Project result in an undue adverse effect on air quality?

A10. No. Work during the Project's construction phase will result in minor air emissions. There will be vehicle emissions at the site from the use of diesel- and gasoline-powered vehicles and equipment. There may also be brief releases of dust generated during equipment and material transport, earthmoving, and general construction activities. VELCO will manage dust resulting from construction activities in accordance with the *Vermont Standards and Specifications for Erosion Prevention & Sediment Control* and the VEGM.

During the operational phase, a geothermal design will be used for the facility's thermal needs, which reduces emissions associated with the facility. Two (2) one-megawatt generators are proposed as part of the Project for emergency backup needs. In addition to emergency power needs, it is anticipated that the generators will be tested for a thirty-minute duration once a week. The limited use of the generators at the site will result in only negligible air emissions. See **Exhibit Petitioner JTR-2.**

Q11. Will the Project result in undue adverse water quality conditions?

A11. No. Since the proposed Project construction activities will involve more than one acre of earth disturbance, the Project will require a Vermont Department of Environmental Conservation ("VTDEC") Construction Stormwater Discharge Permit prior to construction. VELCO will perform all earth disturbances in accordance with the Construction Stormwater Discharge Permits, *The Vermont Standards and Specifications for Erosion Prevention & Sediment Control*, and the VEGM. VELCO will also develop and adhere to a detailed Erosion Prevention and Sediment Control Plan ("EPSC Plan") for the Project. Implementation and adherence to the EPSC Plan and the VEGM, as well as environmental compliance oversight inspections, will ensure the protection of water quality during Project construction activities.

As mentioned previously, VELCO is proposing to install two (2) one-megawatt backup diesel generators that will be used in the event of a power failure. Each generator will include an integrated double-walled fuel tank with enough fuel for a 24-hour run-time. In

accordance with the U.S. Environmental Protection Agency's Spill Prevention, Control and Countermeasure ("SPCC") Regulations (40 C.F.R. Part 112), after construction, VELCO will develop a site-specific SPCC Plan that addresses the design, handling, and management of oil-filled equipment in order to prevent a discharge of oil into navigable waters. VELCO will adhere to its SPCC Plan, which will include site-specific drainage pathways and detailed information on spill-response measures in order to ensure protection of waters adjacent to the Project in the event of a release of oil or hazardous material to the environment during operation.

If a release of a hazardous material were to occur during the Project's construction or operational phase, VELCO would take appropriate steps to contain it, report the release to the VTDEC (as necessary), remove the contaminated material from the site for proper disposal, and restore the area in accordance with the VEGM and applicable state and federal regulations.

Implementation and adherence to the EPSC Plan, the VEGM, *The Vermont Standards and Specifications for Erosion Prevention & Sediment Control*, the SPCC Plan, and environmental compliance oversight inspections throughout construction will ensure the protection of water quality during Project construction and operation. See **Exhibit Petitioner JTR-2.**

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

Q12. Will the Project result in undue adverse effects to headwaters?

A12. No. In order for a project to satisfy the headwater criteria, it must demonstrate compliance with any applicable health and environmental regulations regarding the reduction of the quality of the ground or surface waters flowing through or upon lands which are not devoted to intensive development. These headwater areas are defined as: (1) watersheds characterized by steep slopes and shallow soils; (2) drainage areas of 20 square miles or less; (3) elements above 1,500 feet; (4) watersheds of public water supplies designated by the Vermont Agency of Natural Resources ("ANR"); or (5) areas supplying significant amounts of recharge waters to aquifers

Stantec analyzed available information and conducted field surveys in order to determine if the Project will be located in any lands that meet the criteria of 10 V.S.A. § 6086(a)(1)(A). Based on this information, it was determined that the Study Area is: (a) not characterized by steep slopes and shallow soils, (b) not positioned above 1,500 feet, (c) not a watershed designated by ANR as a public water supply, and (d) not an area supplying significant amounts of recharge water to aquifers. The Study Area is within the subwatershed (Hydraulic Unit 12 (HU12) - Subbasin) headwaters of Little Otter Creek, which has a total subwatershed area of 117.6 square miles (greater than 20 square miles). It is also located within the Greater Lake Champlain Drainage Basin (Otter Creek Basin, Water Quality Management Plan, May 31, 2012). Based on this information, it was determined that the Study Area is not located within headwaters as defined above and

therefore demonstrates that the Project will not reduce the quality of ground or surface waters flowing through or upon lands as defined above. The potential effects of the Project on ground and surface water quality will be minimal. With the implementation of the practices and standards contained within the VEGM, and Project-specific EPSC Plan, the Project will have minimal potential to adversely affect the natural flow regime; groundwater recharge; the condition or water quality of streams, groundwater, and wetlands; or the public health. The Project will meet any applicable VTDEC regulations regarding the reduction of the quality of the ground or surface waters flowing through or upon lands. Therefore, the Project will not result in undue adverse effects to headwaters. See **Exhibit Petitioner JTR-2.**

7. <u>Waste Disposal [10 V.S.A. § 6086(a)(1)(B)]</u>

Q13. Please discuss VELCO's plans regarding waste disposal.

A13. The Project will neither require nor involve the injection of any waste materials or any harmful or toxic substances into ground water or wells. The Project is expected to involve limited waste disposal, and will comply with all state and federal regulations regarding the handling and disposal of waste.

VELCO will dispose of solid waste, construction debris, and waste that cannot be composted, reused, or recycled in accordance with the applicable state and federal regulations and best management practices.

The Project requires VELCO to remove woody vegetation in limited areas in order to complete the proposed Project activities. VELCO will either chip the woody debris onsite or transport the material offsite for disposal.

VELCO will stockpile and dispose of clean wood products that are brought onsite during Project construction as part of equipment and/or material deliveries (i.e., pallets) in accordance with Act 148, the Universal Recycling and Composting Law. VELCO and/or GMP will perform utility pole removal and replacement activities in accordance with the Penta BMP identified in Docket 8310, which will be accomplished by onsite training for any entities working on the Project that handle penta-treated poles, including GMP.

The sanitary facilities installed as part of the proposed project will interconnect with VELCO's existing New Haven Substation wastewater system, which will be upgraded to support the additional load from the proposed project. A wastewater permit will be required for this interconnection and expansion, which VELCO will obtain seek from the VTDEC. See **Exhibit Petitioner JTR-2.**

As stated above, VELCO will also develop a site specific SPCC Plan that includes spill control and response measures in the event of a release of oil and/or hazardous material at the Project site, and specifies the currently-available secondary containment systems as necessary.

A portion of the Project is sited on an existing gravel yard that contained VELCO's old New Haven Substation until it was decommissioned in 2010. As part of the

decommissioning of the substation, soil samples were screened for contaminates including PCBs. All of the soil samples from the yard tested negative for contaminants. However, there was some visible soil staining that was observed during the decommissioning effort. This soil was tested and disposed of in accordance with state and federal regulations.

As part of the decommissioning effort, VELCO removed from service the water well that had once served the old substation. During this process, the pump had dropped to the bottom of the well, and had to be retrieved by a well drilling company. Post-retrieval water samples revealed PCB contamination of the well, presumably from the oil that was housed within the damaged well pump. VELCO worked with Long Trail Environmental and the ANR Waste Management Division to remediate the PCB contamination and to decommission the well in accordance with the Vermont Water Supply Rule.

Q14. Will the Project require an operational stormwater permit?

A14. Yes. The New Haven Operations facility will result in approximately 3.1 acres of new and redeveloped impervious surfaces, thereby requiring an operational stormwater permit. Moreover, VELCO has committed to conducting an inventory of all impervious surfaces at its New Haven property, including the adjacent New Haven Substation as part of a review of the VTDEC 3-Acre General Permit (3-9050). VELCO has retained Stantec to develop an effective operational-phase stormwater management system that is in compliance with conditions of VTDEC General Permit 3-9015 (or new General Permit

3-9050, if applicable) and the Vermont Stormwater Management Manual (VSMM, 2017). See **Exhibit Petitioner JTR-2.**

Q15. Will the Project have an undue, adverse effect on waste disposal?

A15. No. The implementation of the plans and adherence to the criteria mentioned above will ensure that proper waste disposal practices are performed during the construction and operation of the Project. As such, the Project will not have any undue adverse impacts relating to waste disposal.

8. <u>Water Conservation & Supply [10 V.S.A. § 6086(a)(1)(C) & (a)(2) & (3)</u>

Q16. Will the Project have an undue adverse effect on water conservation?

A16. No. Based on the proposed Project design, a new well will be installed on the east side of the Main Building to supply potable water. This new well will have adequate capacity to meet potable water needs during building operation. The new water well will require a Vermont Wastewater System and Potable Water Supply Permit. The Project will, where technically and economically feasible, incorporate measures to conserve water use, recycle water, and maintain the efficient operation of any such measures. VELCO has committed to utilize low-flow fixtures throughout the building, and the building will remain unoccupied most of the time. Moreover, the heating and cooling systems will be designed as "closed-loop," thereby eliminating the need for significant water usage.

There is the potential that the Project will need water for dust control, containment testing, and to help establish onsite vegetation (i.e., for restoration and/or aesthetic mitigation plantings); however, the amount of water used for these temporary, construction-phase related efforts will be limited in duration and will only be utilized if needed. Therefore, the Project will not have an undue adverse effect on water conservation. See **Exhibit Petitioner JTR-2.**

Q17. Will the Project burden existing water supplies?

A17. No, the Project will require the installation of a new water well, and it will be sited on VELCO-owned property in accordance with the Water Supply Rule and the anticipated Wastewater System and Potable Water Supply Permit. This new well is anticipated to have adequate capacity to meet potable water needs during building operation. As such, the proposed Project will not burden the existing water supplies. See **Exhibit Petitioner JTR-2**.

9. Floodways [10 V.S.A. 6086(a)(1)(D)]

Q18. Is any part of the Project located within 100-year flood boundary or floodplain?

A18. No. Stantec analyzed the available Federal Emergency Management Agency, Flood Insurance Rate Maps and the ANR Atlas, and determined that the Project activities are not located on any lands that meet criteria (§ 6086(a)(1)(D)) related to floodways. As such, the Project will not have an undue adverse effect on floodways. See **Exhibit Petitioner JTR-2**.

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

Q19. Will the Project have an undue adverse effect on any streams?

A19. Stantec performed both a desktop evaluation using the ANR Atlas, as well as a thorough natural resources assessment survey within the Study Area, to evaluate the presence of streams. Their results indicate there are no major water courses or impaired waters identified within the Study Area. Stantec identified and mapped one ephemeral stream segment (NH-204) within the Study Area during the field surveys. NH-204 is located along the southern boundary of the Project, where it connects two sections of wetland NH-203. Stream NH-204 is approximately 71 linear ft, with an approximate ordinary high water mark of 5 feet wide (355 sq. ft.). Stantec identified no perennial streams / river corridors in the Study Area.

The ephemeral stream will be permanently impacted as a result of Project grading and fill. As an ephemeral stream, this watercourse is not regulated under ANR's stream alteration rules, although it is assumed to be jurisdictional under U.S. Army Corps of Engineers ("USACE") regulations, and will therefore be subject to the Section 404 permitting process. Based on their analysis in the Natural Resources Report, Stantec has concluded that the permanent impacts to the small, isolated ephemeral stream feature are not unduly adverse.

As such the Project will have no undue, adverse effects on streams. See **Exhibit Petitioner JTR-2.**

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

Q20. Does the Project affect any shorelines?

A20. No. Stantec conducted a review of the Study Area and determined that there are no surface waters (lakes, ponds, reservoirs, or rivers) within or near the Project area that would constitute a shoreline. See **Exhibit Petitioner JTR-2.**

12. Wetlands [10 V.S.A. § 6086(a)(1)(G)]

Q21. Will the Project have any undue, adverse effects on wetlands?

A21. No. Stantec performed thorough field investigations specifically targeted at identifying wetlands and other natural resources and identified several wetlands within the Study Area pursuant to the USACE wetland delineation methodology. Based on the field assessments conducted by Stantec, seven wetland features were delineated within the Study Area: NH-008, NH-009, NH-010, NH-201, NH-202, NH-203, and BUCC-01 as shown on the Natural Resources Map. See **Exhibit Petitioner JTR-2, Figure 2**. The results of Stantec's assessments— and the onsite review of VTDEC—confirmed that two of these wetlands are Class II (NH-202 and BUCC-01) while the remaining are Class III.

VELCO proposes to impact approximately 0.34 acres (14,915 sq ft) of Class III wetland NH-203 with the construction and associated grading of the proposed Project. In addition, there is approximately 0.02 acres (936 sq ft) of temporary and permanent impact proposed for Class III wetland NH-009 associated with the interconnection and retrofit of the existing wastewater system. Class III wetlands are not regulated by the VTDEC although it is assumed to be jurisdictional under USACE regulations, and will

therefore be subject to the Section 404 permitting process under the Clean Water Act. VELCO will seek the necessary authorizations from USACE to permanently impact these Class III wetlands.

Class II Wetland "BUCC-001" and "NH 202" are located south and west of the proposed Project, respectively. VELCO has designed the Project to avoid these Class II wetlands and their regulated buffers entirely.

VELCO will adhere to its Construction Stormwater Discharge permit, Project-specific EPSC Plan, and the VEGM to minimize the Project's potential impacts to wetlands during construction. Therefore, the Project will not have an undue adverse effect on wetlands. See **Exhibit Petitioner JTR-2.**

13. <u>Soil Erosion [10 V.S.A. § 6086(a)(4)]</u>

Q22. Will the Project result in undue, adverse effects related to soil erosion?

A22. No. The proposed Project will require a VTDEC Construction Stormwater Discharge Permit, as the construction activities will involve more than one acre of earth disturbance. VELCO will develop and adhere to a detailed EPSC Plan for the Project to facilitate compliance and proper implementation of stormwater Best Management Practices ("BMPs") to avoid and minimize soil erosion during construction.

VELCO will perform all earth-disturbing activities in accordance with the site-specific EPSC Plan, the Construction Stormwater Permit conditions, *The Vermont Standards and Specifications for Erosion Prevention & Sediment Control*, and the VEGM, so the

proposed construction activities will not cause undue adverse effects on soil erosion, nor cause a reduction in the capacity of the land to hold water from the Project. See **Exhibit Petitioner JTR-2.**

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

Q23. Will the Project have an undue adverse effect on rare and irreplaceable natural areas, necessary wildlife habitat, or threatened or endangered species?

A23. No. Stantec performed a detailed desktop and field assessment for Rare and Irreplaceable Natural Areas ("RINA"), Necessary Wildlife Habitat, and Rare Threatened and Endangered ("RTE") Species. Prior to completing field surveys, a desktop assessment was completed by reviewing existing Element Occurrence RTE data from the VTANR Atlas within a one-mile radius of the Study Area. The desktop assessment was used to target field surveys within habitats that may support RTE plant populations. Results of the desktop assessment yielded no existing RTE occurrences within the Study Area. Six existing plant RTE occurrences and one existing animal RTE occurrence were located within a one-mile radius of the Study Area. Of the known state-listed (Threatened or Endangered) adjacent RTE occurrences, Greene's rush (Juncus greenei) and short-styled snakeroot (Sanicula canadensis var. canadensis) were targeted during the 2018 botanical survey as they have previously been documented to occur in habitats present within the Study Area; sandy road shoulders and mesic forests, respectively. Stantec found no occurrences of RINA, Necessary Wildlife Habitat or RTE Species in or adjacent to the

Study Area. Specifically, no occurrences of the two state-listed RTE species (Greene's rush and short-styled snakeroot) were identified as part of the field survey effort. Additionally, no incidental sightings of any RTE or uncommon animal species were reported during field surveys of the Study Area. Based on the above-mentioned survey efforts, the conclusion is that the Study Area does not contain any populations of State- or federally-listed plant species.

Based on a database inquiry of the U.S. Fish & Wildlife Service ("USFWS") Information for Planning and Consultation ("IPaC") database, two federally-listed species have known ranges within the Study Area: the Indiana bat which is Federally Endangered, and the northern long-eared bat which is Federally Threatened. The Project area does not contain critical habitat for northern long-eared bat or Indiana bat, based on the IPaC review. Moreover, there are no known winter hibernaculum or occupied maternity roost trees for either species within one-mile of the Study Area, therefore the Study Area may be considered "Potential Summer Habitat" for Northern Long Eared bats based on Vermont Fish and Wildlife ("VTFWD") guidance as there were no suitable roost trees for Indiana Bat identified within the Study Area. The Project is proposing limited tree clearing of approximately 1.25 acres to complete the Project. Given the small amount of proposed clearing, the absence of known hibernaculum, occupied maternity roost trees within one mile of the Project, and absence of potential roost trees for Indiana bats, no timing restrictions for tree clearing or construction or mitigation regarding either bat

species are warranted for the Project. As such, the Project will have no undue adverse effect on any of these natural resources. See **Exhibit Petitioner JTR-2.**

15. <u>Greenhouse Gas Impacts [30 V.S.A. § 248(b)(5)]</u>

Q24. Will the proposed Project have any significant greenhouse gas impacts?

A24. No. VELCO's proposed construction activities will result in the release of minor emissions associated with the operation of gasoline and diesel-powered engines and equipment, however these activities will be limited in nature and duration.

As stated above, VELCO is proposing to install two (2) one-megawatt backup diesel generators which will be used in the event of a power failure in the area. As explained in the testimonies of Mr. Haas and Mr. Nelson, these independent and redundant generator capabilities are critical to the overall functionality of the Facility, and its ability to maintain VELCO's transmission assets during a catastrophic event. In order to minimize the operation of the emergency backup generators, VELCO has designed the Project to have two (2) redundant electrical feeds from separate GMP distribution lines, fed by separate, independent substations. The emergency generators will exercise once weekly for approximately thirty minutes each, and may be operated intermittently for testing and maintenance purposes. Beyond the generators and the independent distribution lines, the Main Building will have photovoltaic panels on the roof for on-site consumption to provide local/on-site renewable power to offset electrical demand from the grid.

As described more fully in Mr. Lind's prefiled testimony, the heating for the Main Building is still being designed; however VELCO is planning to incorporate a form of heat-recovery to capture waste heat from the Secondary Data Center and utilize it to supply heat to the rest of the Main Building. Once the servers and equipment in the Secondary Data Center are fully installed, it is anticipated that the recovered heat from the data center would supply sufficient heat for the rest of the Main Building. VELCO is still in the process of designing a supplemental heating system, to be used in the event of a prolonged electrical outage, or during times when the heat recovery is insufficient. It is anticipated that a geothermal system will be installed to meet these heating and cooling needs for the Main Building. The design therefore minimizes greenhouse gas emissions by not relying on fossil fuels for the thermal needs of the building.

Additionally, VELCO plans to install three (3) electric vehicle charging stations, within the parking lot for use by VELCO employees, contractors and visitors to encourage the utilization of electric vehicles in traveling to/from the facility.

For these reasons, and the reasons stated in Mr. Lind's testimony relating to the Project's other efficiency measures, the Project will have no undue adverse effect on greenhouse gases.

16. <u>Use of Natural Resources [30 V.S.A. § 248(b)(5)]</u>

Q25. Will the Project require the use of natural resources?

A25. VELCO will construct this Project with minimal use of natural resources, the Project will require the utilization use of stone, pavement and concrete for the construction of the Project, and the utilization of petroleum-based fuels and lubricants associated with the operation of gasoline and diesel powered vehicles and equipment. As such, there will be no undue adverse use of natural resources.

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

Q26. Does the Project have an undue adverse effect on primary agricultural soils as defined by 10 V.S.A. § 6001(15)?

A26. No. As depicted on Primary Agricultural Soils Map included as Figure 4 within the Natural Resources Report approximately 67.5 acres or 93% of the 72-acre study area contains Primary Agricultural Soils ("PAS") as mapped by NRCS. The NRCS prime farmland classifications with the Study Area are summarized in Table 5 of the Natural Resources Report. See **Exhibit Petitioner JTR-2.**

It is anticipated that Project construction will result in temporary (4.7 acres) and permanent (3.5 acres), and redevelopment (1.4 acres) impacts to of approximately 9.5 acres of NRCS-mapped PAS. The permanent impacts associated with the Project will affect 3.5 acres or 5% of the functional PAS within the Study Area.

The Project has been designed to minimize PAS impacts by utilizing existing roads, drives and redeveloping the old New Haven Substation site. Where temporary impacts are necessary such as the installation of underground utilities, and aesthetic mitigation

plantings, soils will be segregated and replaced in their respective order, following installation. In areas where soil compaction has occurred the area will be tilled, plowed, subsoiled or otherwise decompacted to alleviate soil compaction. In areas that will be permanently impacted, topsoil will be segregated and stockpiled onsite for reuse. Any excess soil that cannot be utilized within the site grading will be disposed of in accordance with applicable regulatory requirements and permit conditions; specifically those outlined within the required VTDEC Construction Stormwater permit, and *The Vermont Standards and Specifications for Erosion Prevention & Sediment Control*. VELCO will develop and adhere to a Project specific PAS Plan outlining mitigation measures and work practices in more detail in consultation with the Vermont Agency of Agriculture, Food and Markets.

Given the expansive area of mapped PAS within the study area and the small percentage being permanently impacted by Project activities, the minimization efforts incorporated in the Project design, and VELCO's commitment to develop and strictly adhere to a Project specific PAS Plan, the Project will not have an undue adverse effect on Primary Agricultural Soils. See **Exhibit Petitioner JTR-2.**

18. Conclusion

Q27. Does this conclude your testimony at this time?

A27. Yes, it does.