

**STATE OF VERMONT  
PUBLIC UTILITY COMMISSION**

Case No. 23-\_\_\_\_\_

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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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**PETITION OF VERMONT ELECTRIC POWER COMPANY, INC.  
AND  
VERMONT TRANSCO LLC  
FOR A CERTIFICATE OF PUBLIC GOOD  
PURSUANT TO 30 V.S.A. § 248**

By this Petition, Vermont Electric Power Company, Inc. and Vermont Transco LLC (collectively “VELCO” or “Petitioner”) request that the Vermont Public Utility Commission (“Commission”) issue a Certificate of Public Good (“CPG”) 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 (the “Project”). In support of this Petition, VELCO states the following based on the prefiled testimony and exhibits submitted by VELCO in this Case:

**I. DESCRIPTION OF THE PETITIONER**

1. VELCO is a company as defined by 30 V.S.A. § 201, and as such is subject to the Commission’s jurisdiction pursuant to 30 V.S.A. § 203. VELCO’s office is located at 366 Pinnacle Ridge Road in Rutland, Vermont.
2. Construction of the Project requires a CPG pursuant to 30 V.S.A. § 248.

## II. DESCRIPTION OF THE PROJECT

3. The description of the Project is further detailed in the Petitioner's prefiled testimony. The Project will upgrade VELCO's K42 transmission line in the Towns of Georgia, St. Albans, Swanton, and Highgate, Vermont. The K42 line is a 115kV line, crossing 16.7 miles to connect VELCO's Georgia and Highgate substations.

4. The primary driver of this Project is to provide necessary upgrades to the K42 transmission line in order to address the deficient asset condition of aging wooden pole structures. The K42 line was originally built in 1958 with various modifications and equipment replacements over the last sixty-five years of service. VELCO conducted a condition assessment of the line and identified the need to replace the majority of the structures due to condition and age.

5. Along with replacing aged and deteriorated structures, the line is being upgraded to add a second electrical conductor to save Vermont and New England power costs and to increase the existing limit of generation that may be sited and/or allowed to operate within northern Vermont within the Sheffield Highgate Export Interface ("SHEI") limit.

6. The Project is planned to allow the K42 Line to be upgraded without taking the existing line out of service, which will reduce significant risk of customer outages during construction, avoid lost revenue for Vermont utilities, and mitigate potential financial impacts.

7. The upgraded line has been designed to maximize use of the existing right-of-way (ROW), creating additional value for Vermont customers by creating space within the existing VELCO ROW to accommodate a potential future line, giving VELCO an opportunity to create value and lower costs for Vermont.

8. The current K42 line includes a two-pole per structure, wooden H-frame design, where the existing three phases of conductors are in a horizontal configuration.

9. This Project will replace the existing two-pole configuration with a vertical configuration on the new structures, which will be predominantly a single pole rebuild constructed with steel structures, instead of wood, for less maintenance and a lower replacement frequency.

10. The new, proposed self-weathering steel structures will have a similar look to wood components. The default foundation type will be directly embedded poles. Approximately ten structures will require some improved foundations to support the increased loads added by the second conductor per phase and reduced pole counts per structure.

11. The vertical configuration will require an increase in height to maintain safe electrical clearances. On average the new structures will be approximately 28 feet taller above grade. The increase in height has been minimized by placing the three phases in a delta configuration (e.g., two phases are side by side, instead of all three stacked vertically).

12. The rebuilt structures will generally be in the same locations as the existing, offset approximately 27 feet to the east. Small shifts (from 0 feet to 25 feet) ahead or back will occur periodically throughout the line to facilitate construction with the adjacent circuit still being energized.

13. About two dozen structures are expected to be moving more than 25 feet, for three primary reasons: 1) to move out of wet areas, undesirable terrain, or to avoid other environmental resources; 2) to avoid other utilities or obstacles; and 3) to improve ground clearances complicated by steep rock outcrops, cliffs and related terrain, which also improves overall accessibility and construction sequencing.

14. The existing circuit utilizes 1,272 kcmil (1.345 inch diameter) 45/7 strand Aluminum Conductor Steel Reinforced (“ACSR”) conductor in a typical one conductor per phase horizontal arrangement (three phase wires per circuit), and includes two approximately 3/8

inch diameter galvanized steel or copper coated steel overhead shield wires, and two existing underbuilt All Dielectric Self Supporting (“ADSS”) fiber cables.

15. New conductor will be installed for the full length of the K42 line. Specifically, two 1,272 kcmil (1.345 inch diameter) 45/7 strand ACSR conductors per phase will be used, with one stranded galvanized steel overhead shield wire assembly of approximately 5/8 inch diameter, which will also contain internal fiber optic strands, commonly referred to as an optical ground wire assembly.

16. Along the entire line, the newer of the existing two underbuilt ADSS fiber cables will be reinstalled, transferred from the existing to the new structures.

17. For this Project, VELCO will need to perform vegetation clearing of the full width of the ROW to accommodate construction equipment.

18. In addition, VELCO needs to remove danger trees from outside of the easement area to ensure safe and reliable transmission of electricity. Danger trees are trees that have the potential to cause a fault or damage to the transmission line in the event of a tree failure.

19. Two and possibly three laydown areas will be used for Project construction.

20. The Project will require limited outages of the K42 Line to connect the replacement line. These outages do not directly cause or require customer outages, however, given the importance of the K42 Line to local and regional reliability, the outages will create the risk of customer outages.

### **III. PROJECT SCHEDULE AND COST**

21. VELCO proposes to begin Project construction as soon as possible upon receiving the required permits and approvals. Currently, the estimated construction schedule is from September 2024 into the fall of 2026. This assumes receipt of a CPG on or before the end of

August 2024. A failure to adhere to this schedule could have adverse impacts on Project execution and overall Project cost.

22. Construction would take place between the hours of 7:00 A.M. and 7:00 P.M. Monday through Friday, and between 8:00 A.M. and 5:00 P.M. on Saturdays. No construction will take place on Sundays, federal holidays, and state holidays with the exception of Bennington Battle Day in August. VELCO requests, however, that these restrictions do not apply to construction activities that VELCO must perform during any required transmission outages that may be needed to maintain system reliability or when work involves crossing the Interstate highway within lower traffic periods.

23. VELCO also respectfully requests that it be allowed to perform construction activities on Bennington Battle Day given the short summer construction season, and that the holiday is not widely granted as a paid day off for the workers on this Project. VELCO expects this would improve construction efficiency when its typical Vermont contractors do not recognize this day as a holiday, and therefore, may attempt to shift their workers to another job site to avoid forced use of vacation or unpaid days off.

24. VELCO also requests permission to commence construction without having first obtained transportation permits. VELCO seeks exemption from the standard condition that requires acquisition of all state and federal permits prior to the start of construction. VELCO needs permits from the Vermont Agency of Transportation (AOT) for Interstate 89 access and aerial crossing and highway curb cuts, and a permit from the New England Central Railroad for the railroad crossing. These permits are not typically pursued until approximately 1-2 months prior to their need in the construction schedule.

25. The total cost of the Project is estimated at \$84,644,559 with contingency.

26. The Project is slated to be an ISO-NE-approved project eligible for regionalized cost recovery, which means VELCO expects Vermont customers will contribute approximately 4% of the Project costs.

#### **IV. NOTICE REQUIREMENTS**

27. Pursuant to 30 V.S.A. § 248(f) and Rule 5.402(A), on June 16, 2023, VELCO issued a 45-day advance notice describing the Project, which was provided to the Selectboards and Planning Commissions in the Towns of Georgia, St. Albans, Swanton, and Highgate, Vermont, as well as the Northwest Regional Planning Commission.

28. Service of copies of the Petition filing will be made on the parties specified in 30 V.S.A. § 248(a)(4)(C) by the Commission through ePUC and by VELCO via U.S. mail, and email where authorized. Pursuant to applicable Commission rules, VELCO has identified each adjoining landowner based on the certified grand lists for the Towns of Georgia, St. Albans, Swanton, and Highgate, Vermont as they existed no more than 60 days prior to the date of the Petition filing. The list of names and addresses of all adjoining landowners was provided to the Commission with the Petition filing.

29. As detailed in the prefiled testimony, VELCO has complied with the public outreach requirements established in the Memorandum of Understanding approved in Docket 7081, and has engaged in extensive public outreach related to this Project.

#### **V. COMPLIANCE WITH SECTION 248 CRITERIA**

30. As summarized below and demonstrated in the prefiled testimony and exhibits submitted by VELCO, the Project meets all Section 248 criteria.

##### **Orderly Development of the Region – 30 V.S.A. § 248(b)(1)**

31. The Project will not unduly interfere with the orderly development of the region giving due consideration to recommendations from municipal and regional planning

commissions and municipal legislative bodies, and land conservation measures included in municipal plans.

32. As further detailed in the prefiled testimony and exhibits, the Project is consistent with the Town plans for Georgia, St. Albans, Swanton, and Highgate, as none have any policies regarding land use or energy that would specifically pertain to or contradict the Project. The Highgate Town Plan does highlight that SHEI is causing generation to be curtailed and that this barrier will need to be addressed for Highgate to meet its energy goals; the Project helps to address this issue.

33. The Towns of Georgia, St. Albans, and Swanton have submitted letters of support for the Project.

34. The Project is also consistent with the Northwest Regional Plan 2023-2031 by upgrading transmission infrastructure and improving capacity in the SHEI area.

**Need for the Project – 30 V.S.A. § 248(b)(2)**

35. The Project is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures, energy efficiency, load-management measures, the introduction of distributed generation or energy storage.

36. As further detailed in the supporting testimony submitted by VELCO, the Project is needed to replace existing deficient transmission line assets that support significant northern and southern flow of electricity within Vermont and New England. This line could not be replaced with energy efficiency, conservation, or load management measures. The planned construction of the replacement line while leaving the existing line in service during construction reduces overall outage risk and provides significant value to both regional and Vermont electric customers.

37. Replacement of the existing line with a single-pole configuration adds value over alternatives like replacing the two-pole structure itself, including mitigation of lost Renewable Energy Credits, allowance for additional ROW space for future use, and expanding the capacity of fiber optics service that can be utilized by VELCO, Vermont electric utilities, Vermont Communication Union Districts, and others.

38. The addition of a second conductor as part of this Project reduces line losses resulting in added economic benefits and creates additional export space within the SHEI area.

**System Stability and Reliability – 30 V.S.A. § 248(b)(3)**

39. The Project will not have an undue adverse impact on system stability and reliability. As detailed in the supporting testimony, the Project will improve system reliability by addressing the deficient asset condition of the existing K42 Line. As well, the addition of the second conductor reduces line energy losses, improves system strength and reactive margin, and increases the export capacity of the SHEI.

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

40. As detailed in the supporting testimony, the Project will create economic and safety benefits to the citizens of Vermont as it restores electric reliability to the deficient asset condition of the K42 line while also reducing line losses, which will provide future value to the Vermont distribution utilities. Additionally, the Project is expected to create future value for Vermont customers by enhancing future transmission capacity in the ROW and lowering costs for Vermont customers through associated revenues. Moreover, by adding another 20 MW of capacity to the SHEI export limitation, the Project will create more opportunity for economic development and renewable energy development in the SHEI area.

41. The Project will also increase property tax revenues based on the capital investment required for the new facilities. Additionally, there will be some local economic



benefits associated with engaging local businesses and contractors during the construction phase of the Project.

**Aesthetics, Historic Sites, Environmental - 30 V.S.A. § 248(b)(5)**

42. As detailed in the prefiled testimony and exhibits, the Project will not have any undue adverse impacts on aesthetics, historic sites, air and water purity, the natural environment, the use of natural resources, or public health and safety with due consideration having been given to the criteria specified in 10 V.S.A. §§ 1424(d) and 6086(a)(1) through (8) and (9)(K), impacts to primary agricultural soils as defined in 10 V.S.A. § 6001, and greenhouse gas impacts.

43. VELCO retained VHB to perform comprehensive natural resource assessments within the area of the proposed Project, which includes the K42 transmission line ROW, off-ROW access routes, and two proposed laydown yards.

44. VELCO retained WSP USA Inc. (WSP) to perform an Archaeological Resource Assessment (“ARA”) and follow-up Phase 1 Archaeology Survey, as well as a Historical Architectural reconnaissance, to determine the proposed Project area’s sensitivity for archaeological and historic resources.

45. VELCO retained T.J. Boyle & Associates (Boyle) to review and assess the potential aesthetic impact associated with this Project and prepare a report of its findings.

46. The majority of the proposed work will occur within areas of previous disturbance or within areas directly adjacent to existing developments, such as with the structure replacements and co-located off-ROW access routes that follow existing farm field access roads.

47. The Project will only require minimal tree clearing. The K42 Line rebuild is located within an existing maintained corridor for which vegetation management will occur to support construction activities consistent with VELCO’s approved Transmission Vegetation Management Plan (“TVMP”) practices. Vegetation management activities, which will consist of

mowing within the existing K42 Line corridor and danger tree removal along the edge of the existing ROW, will also occur during the Project's construction phase. However, the K42 Line's existing 150-foot ROW limits are not increasing for the Project.

**Public Health and Safety – 30 V.S.A. § 248(b)(5)**

48. As detailed in the supporting testimony, the Project will not have adverse effects on the health, safety, or welfare of the public or adjoining landowners. VELCO will design and construct the Project in accordance with National Electric Safety Code requirements.

49. VELCO will adhere to prudent utility construction practices throughout the construction phase to not endanger the public or adjoining landowners.

50. VELCO modeled the electric and magnetic field (EMF) levels for the Project and hired Dr. Christopher Long at Gradient, Inc. as an expert in the field of EMF to review the proposed changes to the K42 Line and with respect to EMFs, their effect on public safety. With the rebuilt line having a vertical/delta configuration there is a mitigating effect on the EMF levels.

51. In summary of this review, Dr. Long concluded that “All of the modeled electric and magnetic field values fall well below the health-based guidelines of the International Commission on Non-Ionizing Radiation Protection (ICNIRP) for public exposure to EMF, namely, 4.2 kV/m and 2,000 mG (ICNIRP, 2010). Overall, there is thus no expectation of adverse health effects due to the EMF changes caused by the K42 Line Rebuild and Reconducting Project.”

**Air Pollution and Noise – 10 V.S.A. § 6086(a)(1)**

52. There are no sound producing devices proposed as part of this line rebuild Project.

53. The Project will not result in undue air pollution. The operation of the proposed Project does not involve any facilities that will generate air pollution and will not be subject to an air pollution control permit under the VT ANR Air Pollution Control Regulations.

54. During the Project's construction phase, there will be vehicle emissions from the use of diesel and gasoline powered vehicles and equipment. There may also be brief discharges of dust generated by equipment and material transport, earthmoving, and general construction activities. VELCO will manage dust resulting from construction activities in accordance with the Vermont Standards and Specification for Erosion Prevention and Sediment Control and the VELCO Environmental Guidance Manual ("VEGM").

**Water Pollution –10 V.S.A. § 6086(a)(1)(A)**

55. The Project will not result in any undue water pollution as detailed further in the prefiled testimony and exhibits.

56. The proposed Project activities will involve more than one acre of earth disturbance; therefore, the Project will require appropriate coverage under Vermont Department of Environmental Conservation's ("VT DEC") Individual Construction Stormwater Discharge Permit (INDC). VELCO will perform all earth-disturbing activities in accordance with the Construction Stormwater Discharge Permit issued for the Project, the Vermont Standards and Specifications for Erosion Prevention and Sediment Control, and the VEGM. Prior to construction, VELCO will obtain the appropriate INDC permit for the Project.

57. The proposed Project will require State and Federal permit authorizations for temporary and permanent impacts to regulated wetlands and wetland buffers, which VELCO will obtain prior to Project construction and will adhere to in order to maintain water quality conditions on the Project.

58. If a release of a hazardous material were to occur during the Project's construction phase, VELCO would take appropriate steps to contain it; report the release to the VT DEC (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.

**Headwaters – 10 V.S.A. § 6086(a)(1)(A)**

59. The Project will not result in undue adverse effects on headwaters.

60. For all portions of the Project, including those that meet the headwaters sub-criteria, VELCO will ensure that potential affects to ground and surface water quality are appropriately managed with the implementation and adherence to the Project-specific Erosion Prevention and Sediment Control Plans (to be developed as part of INDC Permit coverage), and applicable Best Management Practices (“BMPs”) outlined in the VEGM.

61. VELCO's adherence to the protective measures detailed in its prefiled testimony will ensure that construction and operation of the Project will not adversely affect public health, the natural flow regime or groundwater recharge, condition or water quality of potential headwater streams, groundwater, or wetlands.

62. The Project will meet applicable health and environmental conservation department regulations regarding the reduction of the quality of the ground or surface waters flowing through or upon lands that are not devoted to intensive development, including compliance with the Vermont Water Quality Standards.

**Waste Disposal – 10 V.S.A. § 6086(a)(1)(B)**

63. The Project will not require nor involve the injection of any waste materials or any harmful or toxic substances into ground water or wells.

64. The Project will involve limited waste disposal and hazardous material storage for equipment refueling during construction and will comply with all state and federal regulations regarding the handling and disposal of waste.

65. VELCO will perform the existing K42 line structure replacement/removal activities in accordance with the Penta BMPs identified in Docket 8310, which will be accomplished by onsite training for entities working on the Project that handle penta-treated poles.

66. Impervious surfaces for the Project will remain below one acre, and the proposed St. Albans Tap Station gravel driveway realignment will not exceed 0.5 acres of new impervious surfaces. Therefore, this Project component, nor the remainder of the proposed work activities will trigger the need to obtain 3-9050 permit (operational phase stormwater) coverage.

**Water Conservation & Supply– 10 V.S.A. §§ 6086(a)(1)(C), (a)(2) &(3)**

67. The Project will incorporate measures to conserve water use and recycle water where technically and economically feasible. As proposed, VELCO does not anticipate the need or applicability of any permanent water conservation measures with the Project. During construction of the Project, limited amounts of water may be necessary to control dust, support limited concrete washout activities, and/or assist in vegetation establishment. Following its construction and commissioning, no water usage will be necessary as part of the K42 Line operation. Due to the limited demand for water, the Project will not have an undue adverse effect on water supplies.

**Floodways – 10 V.S.A. § 6086(a)(1)(D)**

68. As detailed in the prefiled testimony, the Project will not restrict or divert the flow of floodwaters or increase the peak discharge of the watercourse and endanger the health, safety, and welfare of the public or of riparian owners during flooding.

69. Per 10 V.S.A. § 6001(6), a “flood hazard area” is “the land in the flood plain within a community subject to a 1 percent or greater chance of flooding in any given year” (44 CFR § 59.1), where a one percent chance of flooding is synonymous with the 100-year floodplain. VELCO considered the proposed line rebuild, specifically the structure replacements, with respect to both flood inundation and fluvial erosion hazards pursuant to the Flood Hazard Area and River Corridor (“FHARC”, “FHA”, or “RC”) Protection Procedure (ANR 2017).

70. Given the nature of the rebuild project, engineering and design limitations preclude the ability to relocate all structures outside FHARC areas. This structure siting limitation is due, in part, to the fact that the replacement structures need to be closely co-located adjacent to the existing structure, which mitigates the potential that the inside phase (conductor) from one line could potentially make contact with an adjacent mid-span structure from the phase blowing out to the side. However, in accordance with the FHARC Procedure and VELCO’s own internal processes as outlined in the VEGM, VELCO sited replacement structures to minimize or avoid FHAs and RCs areas wherever possible.

71. Through design, avoidance, and minimization measures detailed in the supporting testimony, the Project will obtain permit approval under the FHARC Rule, and as such, will not restrict or divert the flow of floodwaters, and will not increase the peak discharge of the watercourse.

**Streams – 10 V.S.A. § 6086(a)(1)(E)**

72. As detailed in the prefiled testimony and exhibits, the Project will minimize impacts to the natural conditions of streams and will not endanger the health, safety, or welfare of the public or adjoining landowners.

73. VELCO retained VHB to delineate and map perennial and intermittent streams and characterize their physical and natural conditions during comprehensive field surveys performed in 2022 and 2023 throughout the Project Assessment Area.

74. In total, VHB identified and mapped 14 perennial streams, 6 intermittent streams, 1 intermittent/ephemeral feature, 1 ephemeral stream, and 15 ditches. The K42 Line crosses five different named stream features, including the Missisquoi River, Mill River, Stevens Brook, Stone Bridge Brook, and Hungerford Brook.

75. To minimize stream and riparian buffer impacts, VELCO employs a conservative design approach to protecting streams and managing riparian buffers by locating the necessary construction activities and Project elements to avoid impacts to these resources, wherever possible.

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

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

78. As further detailed in the prefiled testimony, the Project's impact on the natural conditions of streams has been minimized through a conservative design approach, BMP implementation, site-specific erosion control measures, and adherence to the VEGM and all necessary permit conditions.

**Shorelines – 10 V.S.A. § 6086(a)(1)(F)**

79. The Project will, insofar as possible, retain shorelines and waters in their natural condition, allow continued access to the waters and the recreational opportunities provided by the waters, retain or provide compatible vegetation that will screen the Project from the waters, and stabilize the bank from erosion as necessary with vegetation cover.

80. VHB identified one river to have a protected shoreline within the Project Assessment Area (PAA). As stated in the Natural Resource Report prepared by VHB, "the shoreline associated with the Missisquoi River will remain in its current condition as the Project will use an existing and maintained ROW." The K42 Line crosses the Missisquoi River at structure span 415-416, which is located on the northern end of the PAA and will require federal approval under Section 10 of the Rivers and Harbors Act for the line's aerial crossing component.

81. No lakes, reservoirs, or large, permanent ponds that would have protected shorelines were identified by VHB within the PAA. No Project related earth disturbance is proposed along the banks of the Missisquoi River and VELCO will continue to manage shoreline vegetation in the ROW in accordance with VELCO's TVMP.

**Wetlands – 10 V.S.A. § 6086(a)(1)(G)**

82. As detailed in the VELCO prefiled testimony and exhibits, the Project will comply with the rules of the Secretary of Natural Resources relating to significant wetlands.



83. VELCO retained VHB to conduct comprehensive field surveys and delineate jurisdictional wetlands in the PAA. All wetland surveys were performed pursuant to the criteria in the Vermont Wetland Rules and based on the following definition: “those areas of the State that are inundated by surface or groundwater with a frequency sufficient to support significant vegetation or aquatic life that depend on saturated or seasonally saturated soil conditions for growth or reproduction” (10 V.S.A. § 902).

84. VHB delineated wetlands for the Project using the delineation methodology prescribed in the Vermont Wetland Rules, which is enumerated in the U.S. Army Corps of Engineers Wetland Delineation Manual (1987), and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) (2012).

85. VHB delineated 86 wetland features within the PAA; 56 are Class II wetlands, and the remaining 30 are Class III wetlands.

86. VELCO has avoided siting Project activities within wetlands wherever feasible. Where complete avoidance is not achievable, VELCO is proposing to avoid permanent impacts to wetlands, wherever practicable, through the deployment of temporary timber matting during construction. Where VELCO is seeking permit authorization for permanent impacts to wetlands for its proposed access, and in one case a work pad, proposed impacts have been minimized to the greatest extent possible with respect to wetlands and their associated functions and values.

87. VELCO will seek the necessary approval from the United States Army Corps of Engineers (“USACE”) under the authority of Section 404 of the Clean Water Act for its proposed approximately 1.12 acres of permanent impacts to waters of the US (including wetlands).

88. In addition, VELCO will obtain a VT State Wetlands Permit from the VT DEC for its proposed approximately 0.98 acres of permanent impacts to Class II wetlands and 3.4 acres of permanent impacts to Class II wetland buffers.

89. VHB identified and confirmed one vernal pool adjacent to Structure 400. As detailed in its prefiled testimony, VELCO will avoid direct impact to this vernal pool and mitigate indirect impacts to the pool and associated vernal pool amphibians to the greatest extent possible.

90. As with other recent projects, VELCO will perform the necessary mitigation for the Project's proposed permanent wetland impacts as part of the wetland permitting process with USACE and VT DEC, which, along with the avoidance and minimization measures detailed in its prefiled testimony, will likely include an in lieu fee payment administered by Ducks Unlimited for USACE. As such, VELCO will avoid or mitigate significant adverse impacts to wetland functions and values through its design of the Project and permit-specific compensatory mitigation.

**Soil Erosion – 10 V.S.A. § 6086(a)(4)**

91. The Project will not cause undue adverse effects on soil erosion, or cause a reduction in the capacity of the land to hold water from the Project.

92. The proposed Project will require VT DEC Construction Stormwater Discharge Permit coverage for the K42 Line replacement, because construction activities will involve more than one acre of earth disturbance. Consequently, VELCO will perform all earth-disturbing activities in accordance with a site-specific Erosion Prevention and Sediment Control plan, the conditions as set forth in an Individual Construction Stormwater Discharge Permit, the Vermont Standards and Specifications for Erosion Prevention and Sediment Control, and the VEGM.

**Transportation Systems, 10 V.S.A. § 6086(a)(5)**

93. As detailed in the prefiled testimony, the Project will not cause unreasonable congestion or unsafe conditions with respect to the use of highways, waterways, railways, airports, or airways.

94. VELCO does not expect long-term traffic impacts from the Project. There will be minor short-term traffic impacts due to the pulling of conductor/cables across roadways and deliveries of Project equipment to the transmission line area during the construction period (expected to be from September 2024 through fall of 2026). Such deliveries will use existing roads with vehicles that are commonly used on public roads. During delivery of any large equipment, VELCO will employ the services of traffic control personnel to manage traffic flow and enable emergency response vehicles to get to and from where they need to go. VELCO will obtain all required highway crossing permits and provide advance notice of construction phases/activities to affected adjoining neighbors.

95. The Project will not impact waterway transportation.

96. During the construction phase of stringing conductor/cables over the railway between structures 342 and 343, VELCO and its contractors will coordinate with the New England Central Railroad for safety during this crossing. With this coordination, VELCO does not expect any impact to railway transportation.

97. VELCO submitted height and location information of all its proposed replacement structures to the Federal Aviation Administration (“FAA”) for airspace obstruction evaluation. The FAA responded with a determination of no hazard to air navigation and no need for visible markers or lighting for aviation safety.

98. The Project will require several new access roads to get to the ROW.

**Educational and Municipal Services, 10 V.S.A. §§ 6086(a)(6) & (a)(7)**

99. The Project is not anticipated to have any impact on educational or municipal services because it will not create the need for any additional educational or municipal services.

**Historic Sites – 10 V.S.A. § 6086(a)(8)**

100. The Project will not have an undue adverse impact on historic sites as detailed in the VELCO prefiled testimony and exhibits.

101. Generally, a “historic site” is a site that has been officially included or “registered” in the National Register of Historic Places and/or the state register of historic places. The Project, as proposed, will not have an undue adverse impact on historic sites.

102. VELCO retained WSP to perform an Archaeological Resource Assessment and follow-up Phase 1 Archaeology Survey, as well as a Historical Architectural reconnaissance, to determine the proposed Project area’s sensitivity for archaeological and historic resources.

103. While the proposed Project transmission structures (poles) will be slightly taller than the existing structures they replace, WSP concluded that the transmission line replacement would not directly affect any historic property in a manner that would result in the alteration of significant architectural features. As such, upgrading the K42 Line from its existing wooden H-frame configuration to the proposed slightly taller steel single-pole design will not have an undue adverse effect on above ground historic sites, as further detailed in the supporting testimony and exhibits.

104. Following its background research and an ARA, WSP performed extensive shovel tests throughout the Area of Potential Effects (“APE”) in areas of confirmed archaeological sensitivity and/or where known Historic Sites were located proximate to the APE. As the previously known and documented sites did not reveal significant cultural materials in the APE and VELCO will implement protective signage, barricade tape, training and matting to avoid

impacts to the two newly identified, potentially significant sites during construction, WSP concluded that no further archaeological testing was necessary.

**Aesthetics and Scenic or Natural Beauty – 10 V.S.A. § 6086(a)(8)**

105. The Project will not have an undue adverse impact on aesthetics or the scenic and natural beauty of the area.

106. VELCO retained T.J. Boyle & Associates to review and assess the potential aesthetic impact associated with this Project and prepare a report of its findings.

107. The Boyle report concludes that although the Project would result in overall adverse impacts to the aesthetics and scenic and natural beauty of the area, the level of adversity would be very low, and therefore, not unduly adverse.

108. Boyle's conclusion is based on the following: 1) the Project would replace existing electrical transmission infrastructure; 2) the new proposed line would result in limited changes to the scale, form or overall visual appearance compared to the existing 115 kV transmission line; 3) visibility of Project components would be limited, screened by surrounding vegetation and other obstructions; 4) within views that would have visibility of Project upgrades, existing transmission infrastructure is already an established part of the visual landscape, and there would be very limited locations where upgrades would result in new visibility of transmission infrastructure; and 5) the proposed transmission infrastructure would be similar in color, size and form as existing transmission infrastructure within the same location.

109. The Project would also be mitigated by the following. The Project is located within an existing transmission corridor where transmission infrastructure is a well-established component of the visual landscape. The Project would replace an existing 115 kV transmission line with a proposed 115 kV transmission line. VELCO chose self-weathering steel structures that create a brown color, along with non-specular conductor and OPGW wire, which will

mitigate visibility. VELCO has and continues to conduct an in-depth community outreach, which has influenced parts of the Project design. As well, landscape mitigation plantings are proposed to screen and soften limited views that would be created of Project upgrades.

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

110. The Project will not have an undue adverse impact on rare and irreplaceable natural areas, and it will not destroy or significantly imperil necessary wildlife habitat or any endangered species.

111. VHB performed comprehensive assessments of Rare and Irreplaceable Natural Areas (“RINA”), Necessary Wildlife Habitat, and Rare, Threatened and Endangered (“RTE”) Species along the K42 Line in 2022 and 2023.

112. VHB observed and mapped one natural community occurrence within the PAA during field surveys. The identified natural community will not be impacted by the Project, and therefore, no impacts to RINA will occur as a result of the Project.

113. VHB also assessed the Project area for necessary wildlife habitat (“NWH”). State mapped Deer Wintering Areas (DWA) were confirmed during field surveys along two sections of the K42 Line. However, no corridor expansion is proposed so the Project will not result in any direct impacts to DWAs. Based on a conservative estimate and best available information, VELCO has calculated the amount of clearing proximate to mapped DWAs along the edge of the K42 Line ROW as being less than one percent (0.6%) of the mapped DWAs.

114. As further detailed in prefiled testimony, VELCO anticipates that potential indirect impacts from construction equipment operation will occur for a relatively short period and thus not be a significant indirect impact to deer using the DWA mapped adjacent to the K42 ROW.

115. VHB identified and confirmed one area as grassland bird habitat on the K42 Line ROW between structure span 224 – 230, which VTFWD considers NWH. As both the access and work pad construction methodologies within the area of grassland bird habitat are temporary unavoidable impacts, VELCO will seek to mitigate impacts through mitigation payment into the Bobolink Fund for the duration of the Project’s construction phase.

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

117. VHB’s RTE assessment included a desktop review, habitat assessment and field reconnaissance of the PAA. As part of the informed, targeted field surveys, VHB identified and mapped five different plant species occurring along the K42 Line.

118. One State Threatened plant species, Houghton’s flatsedge, was mapped proximate to an existing structure and associated guy anchors. As this structure is slated for replacement, along with the guy anchors, VELCO will seek a Vermont Takings Permit for the unavoidable impacts to the Houghton’s flatsedge plant population.

119. For the other mapped RTE plant populations, VELCO will adhere to the protection measures as outlined in the VEGM and as further detailed in its prefiled testimony, which generally includes contractor training, signage, barricade flagging, and including the population location on project plans for avoidance purposes. In addition, VELCO will implement its NNIS Monitoring and Control Plan for the Project to limit the potential spread of invasive plants that could hinder the ongoing success of RTE plant species.

120. RTE animal species known to occur proximate to the PAA include several aquatic organisms; however, VELCO has designed the Project to avoid impacts to the associated

watercourses, and as such, VHB did not recommend any further surveys or specific mitigation since the species and their habitat will be avoided.

121. Of the terrestrial RTE animal species known to occur proximate to the Project Area (grasshopper sparrow, vesper sparrow, and eastern meadowlark), none overlap the PAA. Grassland bird habitat surveys confirmed suitable habitat and obligate species during field surveys along the K42 line corridor, which included observations of Eastern Meadowlark (S2B, State Rare / imperiled) outside the PAA.

122. If necessary, VELCO will maintain a mowed area matching the access route and crane pads to preclude grassland birds from nesting within work areas. VELCO will avoid potential take of Eastern meadowlark observed by VHB during targeted surveys outside the PAA by establishing its work areas (access routes and crane pads) outside of the nesting season of May 1 to July 31. Once access roads and work pads are established via mowing, the habitat will be temporarily unsuitable for this listed species during the construction phase of the Project whereby potential take is not anticipated.

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

**Development Affecting Public Investments – 10 V.S.A. § 6086(a)(9)(K)**

124. The Project will not unnecessarily or unreasonably endanger any public or quasi-public investment in the facility, service, or lands, or materially jeopardize or interfere with the



function, efficiency, or safety of, or the public's use or enjoyment of or access to the facility, service, or lands.

125. Within Highgate there is a canoe carry trail to get around the Highgate Falls dam that runs through the VELCO ROW between proposed structures 416 and 417. To ensure public safety during construction VELCO will provide trail blockage and closure notification to the Northern Forest Canoe Trail organization that maintains this trail during the temporary periods of active construction.

**Natural Resource and Greenhouse Gas Impacts - 30 V.S.A. § 248(b)(5)**

126. There will be no significant Project impacts related to the use of natural resources or greenhouse gases.

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

128. VELCO's proposed construction activities will result in the release of air emissions associated with the normal operation of gasoline and diesel powered engines and equipment. These primarily construction phase activities will be limited in nature and duration. Operation of the K42 Line will not generate sustained greenhouse gas emissions as part of its normal operation, other than periodic maintenance-related vehicle emissions. As such, the proposed transmission line rebuild Project will not produce significant greenhouse gas emissions.

**Primary Agricultural Soils – 30 V.S.A. § 248(b)(5)**

129. The Project will not have an undue adverse impact on primary agricultural soils (“PAS”).

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

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

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

133. Where VELCO proposes long-term temporary Physical Disturbance in areas of PAS to install stone roads and cut / fill access roads and work pads, permanent impacts to PAS will be avoided by implementing one of two work practices, which are detailed further in prefiled testimony.

134. The work pads needed for structure replacements and wire pulling will only be graded to the extent necessary to establish a level surface for safe and efficient equipment setup and operation. For areas where VELCO proposes cut / fill work pads and access roads in areas mapped as PAS, the available topsoil horizon will be stripped and windrowed/stockpiled adjacent to the work area for later use and addressed as further detailed in its prefiled testimony.

135. VELCO is proposing approximately 1 acre of permanent impacts to PAS for two off-ROW access roads, which have been co-located with historic and ongoing access routes in these two locations. VELCO will seek mitigation for permanent impacts to PAS for both of these permanent off-ROW access road alignments in consultation with Agency of Agriculture Food and Markets (“AAFM”) through in-lieu fee program payment.

136. VELCO will remove all retired and unused material from the ROW as part of the Project’s construction and final restoration phase. Furthermore, VELCO will coordinate the proposed avoidance and minimization strategies for its access and work pad construction with the AAFM. VELCO will coordinate with AAFM and implement appropriate mitigation, particularly if design plans change resulting in more or fewer impacts to PAS.

**Consistency with Principles of Resource Selection in Least-Cost Integrated Plan – 30**  
**V.S.A. § 248(b)(6)**

137. VELCO does not have an integrated resource plan. As a transmission-only company VELCO periodically performs transmission studies to determine whether reinforcements to the transmission system are necessary, and whether system constraints can be mitigated by non-transmission solutions. VELCO also produces a long-range transmission plan at least every three years. Specifically, VELCO recently published the 2021 Vermont Long-Range Transmission Plan. This Project was described and identified as a necessary asset condition mitigation solution in the Long-Range Plan.

138. Pursuant to the Docket 7081 MOU, the Long-Range Plan (“LRP”) is a document that informs the state of future transmission system reliability concerns and gives an initial indication of whether these concerns may be able to be addressed by demand-side measures or local generation.

139. Both the asset condition of the K42 line and other aspects related to enabling renewable energy growth and mitigation of the SHEI issue were discussed in the LRP. This line

rebuild is on the list of possible upgrades to address thermal impacts of generation in section 6.2 of the LRP. The K42 line is also noted as one of the transmission facilities limiting renewable generation growth in the northern portion of the state in section 6.2.1 of the LRP.

**Compliance with Electric Plan – 30 V.S.A. § 248(b)(7)**

140. As detailed in prefiled testimony, the Project is in compliance with the 2022 Vermont Comprehensive Energy Plan (“CEP”), which incorporates the Vermont Electric Plan.

141. The CEP articulates strategies to meet the renewable energy targets in the transportation, thermal and electric sectors. The CEP notes that these targets will not be easy to reach. The Project facilitates renewable energy growth in these three sectors by improving the efficiency of the line, and by addressing capacity limitations, which currently hinder the production of existing renewable generation and the addition of new renewable generation. The Project better positions the system to meet future renewable load growth.

142. The CEP notes that the electric grid must be optimized to ensure resilience and responsiveness, and to benefit all electric customers. The Project mitigates the identified structure degradation concerns, and the new structures are expected to perform better under the increasingly severe weather conditions. Consistent with the CEP’s focus on energy equity, the Project increases hosting capacity, which allows equitable access to renewable energy in local communities currently negatively affected by transmission constraints.

**Outstanding Resource Waters– 10 V.S.A. § 1424a(d), 30 V.S.A. § 248(b)(8)**

143. There will be no impact to this criteria because the Project does not cross any portions of the listed Outstanding Resource Waters (“ORW”). As there are no ORWs in, near, or proximate to the proposed Project, the Project will not result in any impacts to these resources.

**Can be Served Economically by Existing or Planned Transmission Facilities -  
30 V.S.A. § 248(b)(10)**

144. As detailed in prefiled testimony, existing transmission facilities can serve the Project without creating an undue adverse effect on Vermont utilities and customers. The proposed Project is designed to enhance the existing utility system and to improve service to customers by replacing deficient and aged transmission equipment and saving power costs. VELCO will coordinate this work with the Vermont distribution utilities to minimize impacts during construction and to ensure worker safety.

**VI. SUMMARY OF TESTIMONY**

As demonstrated by the testimony and exhibits submitted with this Petition, the Project meets all applicable Section 248 criteria:

<u>Witness</u>	<u>Subject</u>
Scott S. Mallory	Scott S. Mallory provides an overview of the proposed Project, estimated cost and proposed schedule, and explains how the Project complies with Sections 248(b)(1), (b)(2), (b)(4), (b)(5) (aesthetics, public health and safety, noise, transportation, education and municipal services, development affecting public investments), and (b)(10).
Andrew McMillan	Provides testimony demonstrating that the Project will not have undue adverse effects historic sites, air and water purity, or the natural environment under 30 V.S.A. §§ (b)(5) & (8).
Hantz Pr�sum�	Explains the benefits of the second conductor to the system provided by the Project, and addresses the Project's conformance with the State of Vermont's twenty-year Electric Energy Plan (b)(7), as well as its impact on system stability and reliability (b)(3), and the criteria in Section 248(b)(6).
Jeffrey Disorda	Describes: 1) mowing/removal of vegetation within the ROW needed for construction and the expected regrowth afterwards; 2) the danger tree removal outside of the ROW that is needed for the Project, and 3) VELCO's general practice of vegetation management within and outside of the ROW to be done in the future.

## VII. CONCLUSION

WHEREFORE, VELCO respectfully requests that the Commission:

- (1) Hold a scheduling conference, establish a schedule for this case, and issue an Order approving the Project under 30 V.S.A. § 248.
- (2) Find that the proposed Project will promote the general good of the State of Vermont, and authorize VELCO to undertake the actions as described herein and in its testimony and exhibits, and issue a Certificate of Public Good to that effect.
- (3) Issue any further relief as the Commission deems just and proper.

DATED at Burlington, Vermont this 26<sup>th</sup> day of October 2023.

RESPECTFULLY SUBMITTED,

VERMONT ELECTRIC POWER COMPANY,  
INC. and VERMONT TRANSCO LLC

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