

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7545

Petition of Vermont Electric Cooperative, Inc. for a)	Hearing at
Certificate of Public Good, pursuant to 30 V.S.A.)	Montpelier, Vermont
Section 248, authorizing the replacement of 5.25)	December 29, 2009
miles of 46 kV transmission line that begins just)	
west of Hinman Settler Road in Derby, Vermont,)	
and ends at VEC's West Charleston Substation in)	
Charleston, Vermont)	

Order entered: 1/5/2010

PRESENT: Jay E. Dudley, Utilities Analyst, Hearing Officer

APPEARANCES: Joslyn Wilschek, Esq.
Primmer Piper Eggleston & Cramer PC
for Vermont Electric Cooperative, Inc.

Geoffrey Commons, Esq.
for Vermont Department of Public Service

Catherine Gjessing, Esq.
for Agency of Natural Resources

I. INTRODUCTION

This case involves a petition filed with the Vermont Public Service Board ("Board") by Vermont Electric Cooperative, Inc. ("VEC" or "Petitioner") on July 7, 2009. VEC requests approval, pursuant to 30 V.S.A. § 248, to replace 5.25 miles of 46 kV transmission line that begins at Hinman Settler Road in Derby, Vermont, and ends at VEC's substation in West Charleston, Vermont (the "Project"). VEC also proposes to replace existing steel towers with single wood poles utilizing staggered vertical structures.

In this Proposal for Decision, I recommend that the Public Service Board approve the proposed Project and issue a CPG to the Petitioner authorizing construction of the Project, with conditions.

II. PROCEDURAL HISTORY

On August 21, 2009, the Clerk of the Board noticed a prehearing conference in this matter for August 31, 2009.

On August 31, 2009, a prehearing conference was held in this Docket. Appearances were entered by Joslyn L. Wilschek, Esq., Primmer Piper Eggleston & Cramer PC, for Vermont Electric Cooperative, Inc.; Geoffrey Commons, Esq., for the Vermont Department of Public Service ("Department"); and Catherine Gjessing, Esq., for the Vermont Agency of Natural Resources ("ANR").

On September 29, 2009, a site visit was held in the afternoon beginning at VEC's "Laydown Area" at Hinman Settler Road, Derby, Vermont, and ending at VEC's substation in West Charleston, Vermont. That evening, a public hearing was held in the Gymnasium of the Derby Elementary School in Derby Line, Vermont. No members of the public attended the site visit. Eight members of the public attended the public hearing and five signed up to speak. Three of the five members of the public who signed up to speak were property owners whose properties lie within the existing VEC easement for the Project. Those who spoke voiced concerns about unauthorized property access by VEC work crews, pole location and height, line re-positioning, and proximity of the poles and lines to affected residences.

On October 30, 2009, VEC filed supplemental testimony and exhibits regarding a shift of the proposed route between poles 24 and 29A from south to north, and to correct certain typographical errors contained in the Petition.

On November 23, 2009, VEC, the Department and ANR filed a memorandum of understanding ("MOU") in which all the parties agreed that the Board should issue a CPG authorizing the construction of the Project.

On December 18, 2009, VEC filed a letter representing that all parties to this docket stipulate to the incorporation into the record of the prefiled testimony and exhibits filed in this proceeding.

On December 29, 2009, a technical hearing was convened in the Board's 4th floor hearing room in Montpelier, Vermont. At the hearing, the parties waived the opportunity for review of the Proposal for Decision, briefing, and oral argument, in accordance with 3 V.S.A. §811.

III. FINDINGS

Based on the substantial evidence of record and the testimony presented at the technical hearing, I hereby report the following findings to the Board in accordance with 30 V.S.A. § 8.

Background and Project Description

1. VEC is a company as defined in 30 V.S.A. § 201. VEC is also a duly organized electric cooperative under Chapter 81 of Title 30, Vermont Statutes Annotated. Petition at 1.
2. VEC's offices are located at 42 Wescom Road, Johnson, Vermont. Petition at 1.
3. VEC owns and operates an electric system serving approximately 34,000 member-customers in 74 towns throughout Northern Vermont. Petition at 1.
4. VEC plans to replace an existing 46 kV transmission line, approximately 5.25 miles in length, that begins at Hinman Settler Road in Derby, Vermont, and ends at VEC's West Charleston Substation. The proposed Project feeds the distribution systems that serve residences in West Charleston and Island Pond. Petition at 1-3; Abendroth pf. at 3, 6-7.
5. The Project is necessary because the physical condition of the existing towers and line (which were built in the 1920's) has deteriorated and was noted as a specific concern in the System Condition Assessment performed by MPR Associates for VEC in 2007, and also noted as an important needed upgrade in VEC's 2004 and 2007 Integrated Resource Plans ("IRP"). Abendroth pf. at 3-5.
6. The replacement transmission line will be parallel to, and 15 feet southerly, of the existing line except for a (0.42 mile) section between poles 24 and 29A which will be 5 feet north of the existing structures and will be entirely within the existing easement. Petition at 2; Abendroth pf. at 5; exh. VEC-Abendroth-3 (USGS Map); revised exh. VEC-Abendroth-4 (Plan and Profile).
7. The replacement transmission line will utilize single-wood pole construction replacing existing steel poles, with the phase wires arranged in a staggered vertical pattern, and polymer

insulators. The transmission line will also use a small angle horizontal line post and a vertical double dead end structure. Pole heights will not exceed 70 feet above grade. The conductor selected to meet the electrical rating is 336.4 MCM 26/7 ACSR code name "Linnet." A static wire will be located at the top of the pole. Petition at 2; Abendroth pf. at 5-6; revised exh. VEC-Abendroth-4.

8. Construction is expected to begin at Hinman Settler Road in Derby and progress in an easterly direction toward the West Charleston Substation. An outage will be required at the conclusion of construction to energize the new line and de-energize the existing transmission line. This work will be performed within the existing right-of-way. The construction will occur during the winter months to reduce any environmental impact. A 90-foot cleared right-of-way, centered on the new poles, will be maintained. Abendroth pf. at 6-7; Schuyler pf. at 4; exh. VEC-Abendroth-5.

9. In general, the existing right-of-way is 120 feet wide in wooded areas and 60 feet wide in open land; however the right-of-way has not been maintained to its full width in wooded areas for some time.¹ VEC has easements affecting seven parcels of land for which the easement gives permission to build and operate a transmission line, but is silent as to the exact width of the right-of-way. For these parcels, VEC is seeking updated easements that clearly specify a defined right-of-way width. Other than that, VEC believes it has all necessary easements. Abendroth pf. at 3; exh. VEC-Abendroth-1.

10. VEC has identified a proposed laydown area for the Project that is located approximately 300 feet south of the point where the 46 kV transmission line passes over Hinman Settler Road. Schuyler pf. at 4; exh. VEC-Schuyler-3.

11. In order to minimize impacts to wetlands and archaeologically sensitive areas, winter construction is proposed for the line. Upon completion of the new transmission line, the existing line will be removed and all materials will be sold for scrap to a licensed recycler. The old steel towers will be removed 6 inches below the ground surface, except in agricultural fields where the structures will be removed to 12 inches below the ground surface. Disturbed soil will be

1. VEC did not include the varying right-of-way widths in its exhibits filed with the Petition, stating that doing so would have been time consuming and costly. Abendroth supp. pf. at 3.

stabilized using appropriate winter construction techniques. When weather conditions permit, disturbed earth will be restored to the contour of the immediate surroundings and seeded.

Schuyler pf. at 4-5; exh. VEC-Abendroth-5.

12. The estimated total cost of the Project is \$3,300,000. Abendroth pf. at 7; exh. VEC-Abendroth-6.

The MOU

13. On November 23, 2009, VEC, the Department and ANR (collectively, "the Parties") submitted an MOU, in which the parties agree that the Board should issue a CPG for the proposed Project. MOU of 11/23/09 at 2.

14. The Parties agree the Project is consistent with the general good of the State of Vermont and will not have an adverse effect on Vermont ratepayers. *Id.*

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

15. The proposed Project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. This finding is supported by findings 15 and 16, below.

16. The proposed Project will have a favorable impact on the orderly development of the region in that it will maintain the reliability of the region's existing electrical energy supply. West Charleston does not have a Town Plan. The Derby Town Plan, as adopted on March 5, 2002, states that "Electric or transmission lines shall be installed so as to minimize aesthetic and ecological impacts." With respect to aesthetics in particular, the Project provides an improvement compared to the steel tower line that currently exists. Abendroth pf. at 8.

17. The Northeastern Vermont Development Association, the Town of Charleston Selectboard, Town of Derby Planning Commission, and Town of Derby Selectboard have waived the 45-day advance notice period and have issued letters supporting the Project. Abendroth pf. at 8; exh. VEC-Abendroth-7.

Need for Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

18. The Project is required to meet the present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and load management measures. This finding is supported by findings 18 through 23, below.

19. The existing transmission line originates in Newport at a substation operated by the Vermont Electric Power Company, Inc. ("VELCO"), and delivers electric power to VEC's Derby Substation 45, West Charleston Substation 48, and Island Pond Substation 47. The proposed Project involves the portion of the transmission line between the Derby and West Charleston Substations. Abendroth pf. at 3; exh. VEC-Abendroth-1.

20. The Project is required to meet the need for present and future demand for service in the West Charleston and Island Pond area by replacing obsolete and/or failed transmission line components. Energy conservation programs and measures, energy efficiency, and load management will not eliminate the need for the Project. Abendroth pf. at 9.

21. The existing line, approximately 5.25 miles long, was constructed circa 1922, utilizing 65 lattice towers to support the conductors. This segment of the transmission line begins at Hinman Settler Road in Derby and ends at VEC's West Charleston substation. The top of each structure is approximately 55 feet above grade. The steel structures are severely deteriorated at the ground level. Citizens Communications Company, the prior owner of the line, installed guy wires on the towers as a way to shore-up and extend the life of the towers. After VEC acquired the Citizens system, VEC installed guy wires on a single tower that was near collapse and stabilized that tower. Abendroth pf. at 3-4; Abendroth supp. pf. at 2; tr. 12/29/09 at 15 (Wright).

22. The severity of the deterioration of the existing structures is location specific and varies from minor corrosion to complete loss of structural integrity. All of the towers had guy wires installed either by Citizens Communications Company, the prior owner of the line, or VEC after it acquired the Citizens system, to provide additional structural support. The physical condition of the existing towers was noted as a specific concern in the System Condition Assessment performed by MPR Associates for VEC in 2007. That Assessment was submitted to the Board

and the Department in June 2008. This Project is discussed in Findings on pages 2-4 of that assessment. In addition to the structural deficiencies, there is a manually-operated air-break switch at the starting point of the Project that has reached the end of its useful life. This switch, identified as Switch #2, will be replaced with a motor-operated switch as part of the overall Project. Exh. VEC-Abendroth-2; Abendroth pf. at 4-5.

23. Because of the nature of this line, it needs to be constructed with a static wire to provide a high level of reliability to VEC customers. Specifically, the line to the West Charleston substation is a single-line feed that serves both West Charleston and Island Pond local distribution; thus an outage on this line has the potential to affect as many as 3,300 customers. The line traverses terrain that exposes it to lightning strikes. The installation of static or shield wires on transmission and sub-transmission lines has been shown to reduce the number of strikes causing problems. The inclusion of a static wire for this line design provides a relatively low cost method that will help maintain reliability of service to the customers served by this Project. Abendroth pf. at 6.

24. There are no transmission alternatives that would provide a more cost-effective solution. The proposed solution is primarily an "in-kind" replacement of an existing radial transmission line. Radial transmission lines are exempt from consideration of nontransmission alternatives per the Docket 7081 MOU. Memorandum of Understanding, Docket 7081 at page 4, section 3; Abendroth pf. at 7.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

25. The Proposed Project will not have an adverse impact on system stability or reliability. Instead it will significantly improve system stability and reliability by replacing an aging, deteriorating transmission line with a new line. Abendroth pf. at 9.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

26. The Project will provide an economic benefit to the state and its citizens by replacing an obsolete facility that has deteriorated beyond economic repair. The new facility will enhance the reliability of service to this area. Abendroth pf. at 9.

**Aesthetics, Historic Sites, Air and Water Purity,
the Natural Environment and Public Health and Safety**

[30 V.S.A. § 248(b)(5)]

27. The Project will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety. This finding is supported by findings 27 through 92, below, which address the criteria specified in 10 V.S.A. §§ 1424a(d) and 6086(a)(1) through (8), 8(A) and (9)(K).

Outstanding Resource Waters

[10 V.S.A. § 1424(a)(d)]

28. The Project is not located on or near any waters of the state that have been designated outstanding resource waters by the Water Resources Board in the past or by the Natural Resources Board more recently. Schuyler pf. at 15.

Water and Air Pollution

[10 V.S.A. § 6086(a)(1)]

29. The Project will not result in undue water or air pollution. This finding is supported by findings 30 through 36, below.

30. The Project will not result in undue adverse noise pollution. The construction of the facility may require the use of excavation equipment and power augers or other drilling apparatus, but the noise from these machines is not of greater intensity than the noise typically associated with road construction activities. Construction activities will take place between 7 AM and 6 PM. Schuyler pf. at 9.

31. The Project will not result in any air pollution. Since winter construction is planned, dust control will not be an issue. *Id.*

32. The Project will not have an adverse impact on water quality. *Id.*

33. The construction of the new line will not result in the generation of wastewater. The work crews will use the portable sanitary facilities provided by the contractor. Schuyler pf. at 10.

34. The Project requires a Construction Site Runoff General Permit. VEC will apply for coverage as a low-risk construction project under the Vermont Construction Site Runoff General Permit prior to construction. The classification of the project as a low-impact project under the Construction Site Runoff General Permit means that VEC will not submit an Erosion Control and Sediment Management Plan with the General Permit application. However, the erosion control measures employed as described in the Construction and Removal Plan Exhibit VEC-Abendroth-5, will not change and will be consistent with the Vermont Low Risk Site Handbook for Erosion Control and Sediment Management. Schuyler pf. at 10; Schuyler supp. pf. at 4 & 6.

35. The Project does not require a stormwater discharge permit because the total Project impervious area is less than one acre. The Project also does not require a Multi-sector General Permit because electric transmission facilities (SIC Code 4911) do not require such coverage. Schuyler pf. at 10.

36. No permanent facilities that would require a Spill Prevention, Control, and Countermeasures ("SPCC") Plan will be constructed for this Project. If it becomes necessary to store fuels at the construction laydown and staging area, a SPCC Plan will be prepared for the fuel storage. Schuyler pf. at 11.

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

37. The Project will not be constructed in areas that would qualify as headwaters as defined by the statute. Schuyler pf. at 11; exh. VEC-Abendroth-3.

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

38. The Project will meet applicable Department of Environmental Conservation regulations regarding the disposal of wastes. This finding is supported by findings 39 through 43, below.

39. The metal structures and conductor that are removed will be sold for scrap to a licensed recycler. Schuyler pf. at 11; Abendroth pf. at 7.

40. Trees and brush that are cut during right-of-way clearing will be left within the right-of-way. In areas near public roads, the wood waste will be chipped and spread on the ground. In other areas, the brush will be stacked in windrows. Miscellaneous solid waste will be collected and disposed of at a licensed landfill using a commercial waste hauler. Schuyler pf. at 12.

41. No hazardous waste will be generated by construction activities and no transformers are present on the existing line, so no management of discarded transformers that might contain PCBs, a hazardous substance, will be required. Schuyler pf. at 12.

42. The Project will not generate asbestos waste. Schuyler pf. at 12.

43. There are no aquifer protection areas in the Project area. Schuyler pf. at 12; exh. VEC-Schuyler-7.

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

44. This Project does not require water conservation measures because it will not use water. Schuyler pf. at 13.

Floodways

[10 V.S.A. § 6086(a)(1)(D)]

45. Some of the steel towers that will be replaced are located within the floodway or floodway fringe. However, the footprint of the new poles will be no larger than the footprint of the existing structures that will be removed, so the Project will not increase floodplain impacts or increase the risk of damage from flooding. The Project area is not covered by the federal emergency management agency (FEMA) flood maps. See revised exh. VEC-Abendroth-4, Plan and Profile Sheet 11; Schuyler pf. at 13.

Streams

[10 V.S.A. § 6086(a)(1)(E)]

46. The Project will maintain the natural condition of affected streams and will not endanger the health, safety, or welfare of the public or adjoining landowners. This finding is supported by findings 47 through 52, below.

47. The Project crosses 18 small unnamed streams and crosses the Clyde River twice. Schuyler pf. at 13; revised exh. VEC-Schuyler-2 (Wetlands Delineation).

48. There are structures located within the 50-foot buffer zone for the small streams and the 100-foot buffer zone for the Clyde River. VEC has tried to avoid placing poles in these buffer zones, but in some cases the buffer zone could not be avoided. The poles located within these areas to address concerns regarding appropriate span length, wind and ice loads, and landowner issues. Schuyler pf. at 13-14; exh. VEC-Schuyler-8.

49. The location of these poles in the buffer zones will not have an adverse effect on water quality or stream bank stability. The erosion control and sediment management techniques used during construction will protect the streams adjacent to these poles. Schuyler pf. at 14; revised exh. VEC-Abendroth-4.

50. Some streams will be temporarily impacted during construction. Temporary access roads have been designed to avoid stream crossings as much as possible; however, four temporary stream crossings for construction will be required. They are located: (1) west of Pole #7 at Sta 30+08; (2) between Pole 44 and Bushey Hill Road, Sta 178+05; (3) between Pole #48 and #49, Sta 198+07; and (4) approximately 60 feet east of new pole #66. Since these will be temporary crossings, bridge crossings will be used. Revised exh. VEC-Abendroth-4, Sheets 21 and 22; Schuyler pf. at 14; Schuyler supp. pf. at 5.

51. None of these stream crossings require a Stream Alteration Permit or a Stream Crossing Letter. The streams that will be crossed are small and the crossings occur at a point where the upstream watershed is less than 1 square mile. Schuyler pf. at 15.

52. These stream crossings will not have an adverse effect on water quality. Erosion and sediment control structures will be employed and construction equipment will not enter the streams. Schuyler pf. at 15.

Shorelines

[10 V.S.A. § 6086(a)(1)(F)]

53. The Project will not have an undue adverse affect on shorelines. This finding is supported by findings 54 through 56, below.

54. Poles 65 and 66 will be placed on the shoreline of the Clyde River. Pole 65 replaces a transmission tower that is currently at the edge of the Clyde River. Pole 65 is located farther away from the river but still within 50 feet of the top of the bank. Pole 66 is also located within 50 feet of the top of the bank. Schuyler pf. at 16; revised exh. VEC-Schuyler-2.

55. The installation of new poles will utilize construction techniques that protect surface waters so the Project will not have an adverse effect on the shoreline of the Clyde River. Schuyler pf. at 16.

56. The Project will: (i) retain the shorelines and waters within the project area in their natural condition; (ii) allow continued access to the waters and the recreational opportunities provided by the waters; (iii) retain and provide vegetation which screens the Project from the waters; and (iv) stabilize the stream banks from erosion with vegetation cover where necessary. Schuyler pf. at 14-16; tr. 12/29/09 at 12-14 (Wright); exh. VEC-Schuyler-2; exh. VEC-Schuyler-4; exh. VEC-Schuyler-8.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

57. The Project will not violate any rules related to significant wetlands. This finding is supported by findings 58 through 63, below.

58. The transmission line will cross approximately fifty separate wetland areas shown on the National Wetland Inventory Maps. Schuyler pf. at 16; exh. VEC-Schuyler-7; revised exh. VEC-Schuyler 2; exh. VEC-Schuyler-9.

59. The permanent impact to the wetlands will be the maintenance of the additional 40 feet of cleared right-of-way, which in some areas will result in a change in wetland type to scrub-shrub wetland from forested wetland. The new impact from clearing a 90-foot right-of-way is 2.5 acres. Permanent loss of wetland area will not result from this Project, but the change in

wetland type will alter wetland functions from those for wooded wetland to those for scrub-shrub wetland. Temporary wetland impacts will result from construction activities. Approximately 0.1 cubic feet of backfill in wetlands will be required after removal of each old steel tower structure to bring the excavation up to existing grade. Revised Exhibit VEC-Schuyler-10; Schuyler pf. at 17; Schuyler supp. pf. at 6.

60. The plan to construct the line in the winter will enable construction crews to cross wetlands when the ground is frozen. This will minimize the locations where swamp mats or timber mats will be required in order for equipment to pass through wetlands. Any areas where ground disturbance occurs will be stabilized at the time and restored with a seed mix that includes wetland grasses when weather conditions permit. Schuyler pf. at 17.

61. The Project will impact more than 1 acre of wetland so it will require an Individual Permit from the U.S. Army Corps of Engineers ("ACOE"). It will also cross three Class II Wetlands so a Wetland Conditional Use Determination ("CUD") from ANR will be required. Schuyler pf. at 17-18.

62. The Project complies with the wetland permit requirements. VEC designed the Project to minimize wetland impacts in order to comply with federal and state wetland regulations. Schuyler pf. at 18.

63. During the design process, the delineated wetland areas and the 50-foot buffer zone around the Class II wetlands have been considered in the placement of poles and the design of construction access. A 90-foot cleared right-of-way will be used on this Project rather than the 100-foot cleared right-of-way which is VEC's standard practice. This reduces the area of permanent wetland impact. The Vermont Wetland Office has adopted a policy for mitigation of impacts from construction that ranks winter construction as the most preferred construction mitigation measure. Even with winter construction, some areas will require the use of wetland mats. VEC understands that off-site mitigation will be required for additional clearing that will result from maintaining a 90-foot cleared right-of-way. Exh. VEC-Schuyler- 11; revised exh. VEC-Abendroth-4; Schuyler pf. at 18-19.

Sufficiency of Water and Burden on Existing Water Supply

[10 V.S.A. §§ 6086(a)(2)&(3)]

64. The Project will not cause an unreasonable burden on existing water supplies. This finding is supported by findings 65 through 70, below.

65. The Project will not require a water supply. Schuyler pf. at 19.

66. The Project will not affect Source Protection Areas or Wellhead Protection Areas for any Public Water Supplies. Schuyler pf. at 19.

67. There are private wells or springs located in or adjacent to the Project right-of-way. Wells and springs will be marked in the field prior to the start of construction and an exclusion zone will be established around them. VEC will make every effort to locate private wells and contact well owners prior to the start of construction. These efforts will include review of the water well files maintained by the Vermont Department of Environmental Conservation, and visits to residences in the vicinity of the Project. Schuyler pf. at 20.

68. VEC will also take steps to protect private water supplies during on-going maintenance of the transmission line right-of-way. Schuyler pf. at 20.

69. Vegetation control using selective foliar herbicide application is very site specific and the chemicals to be utilized on any given right-of-way will be identified during the permitting process through the Vermont Agency of Agriculture prior to any scheduled applications. The most common chemicals for vegetation maintenance along utility rights-of-way in Vermont today include: Imazapyr (Arsenal/Stalker); Metasulfuron Methyl (Escort XP); Triclopyr (Garlon 3A & 4); and Glyphosate (Accord-same active ingredient as Round Up). All chemicals that would be used are federally registered and labeled for specific uses by the Environmental Protection Agency ("EPA") and will be applied by licensed applicators according to product label directions. Schuyler pf. at 21.

70. The permits granted by the Vermont Agency of Agriculture define buffers to be maintained around all public and private water supplies, as well as the waters of the State. These buffers may be increased based on recommendations from the Vermont Pesticide Advisory Council ("VPAC") depending upon the specific chemical being used and/or the rate of application identified in the permit application. VEC attempts to contact well owners in person

prior to herbicide vegetation control and leaves contact information at the house if no one is at home. Schuyler pf. at 21.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

71. The Project will not cause unreasonable soil erosion or reduce the capacity of the land to hold water. This finding is supported by findings 72 through 74, below.

72. The Project crosses farm fields and wooded areas and in a few areas passes through residential areas. The land slopes down toward Salem Pond and the Clyde River and the line runs approximately perpendicular to the slope. The steepest sections are the descent to the first Clyde River crossing and ascent and descent of the hill northwest of the second Clyde River crossing. Schuyler pf. at 21-22; revised exh. VEC-Schuyler-2.

73. Vegetation clearing, installation of the new line, and removal of the old structures after the activation of the new line will not require disturbing large areas of surface soil, but may create some potential to cause soil erosion. Schuyler pf. at 22.

74. Low impact vehicles will be used for work in the right-of-way. Frozen conditions on access roads will be maintained by plowing them before the start of construction and following significant snowfall. Disturbed areas will be stabilized using winter construction techniques and seeded and mulched as soon as weather conditions permit. Disturbed earth will be restored to the contour of the immediate surroundings and seeded. Erosion control measures will be monitored during and after construction until the soils at the Project are stabilized and vegetation has been re-established. Schuyler pf. at 22-23; exh. VEC-Abendroth-5.

Transportation Systems

[10 V.S.A. § 6086(a)(5)]

75. The Project will not cause unreasonable congestion or unsafe conditions with respect to the use of existing or proposed transportation systems. This finding is supported by findings 76 through 78, below.

76. The Project will have no impact on average daily traffic and the peak hours after construction is complete. Schuyler pf. at 23.

77. There will be temporary impacts during construction. The laydown and mobilization area for the Project will be located on the west side of Hinman Settler Road approximately 300 feet south of the Project right-of-way. Trucks delivering poles and equipment to the work area will start from this location. This section of Hinman Settler Road is straight for more than 300 feet in each direction and the entrance is an established driveway, so no adverse traffic impacts are expected from the temporary use of this area. This section of Hinman Settler Road is not currently identified by the Vermont Agency of Transportation ("VTrans") as an area of traffic congestion. Since the access point will be an existing driveway, a Highway Access Permit will not be required. Exh. VEC-Schuyler -3; Schuyler pf. at 23.

78. Project work areas will be accessed for the most part from existing town and private roads. Three pole locations, ##27, 28, and 56, will be accessed directly from state Route 105. Access to these poles from the highway is required to minimize wetland impacts. Temporary closing of one lane of traffic for several hours may be required for these pole installations. Temporary lane closures for the stringing of the new conductor and removal of the old conductor will also be required. A Highway Access Permit will be acquired for this work prior to construction. These traffic impacts will be of short duration and will not have an undue adverse impact on traffic. Schuyler pf. at 24.

Educational and Municipal Services

[10 V.S.A. § 6086(a)(6)&(7)]

79. The Project will not have any impact on educational or municipal services. Schuyler pf. at 24.

Aesthetics, Necessary Wildlife Habitat, Historic Sites and Rare and Irreplaceable Natural Areas

[10 V.S.A. § 6086(a)(8)]

80. The Project will not have an undue adverse effect on historic sites. The University of Vermont Consulting Archaeology Program ("UVM-CAP") has conducted an archaeological resource assessment ("ARA") for this Project. This document identified areas of potential archaeological concern so a Phase IA investigation was undertaken in the fall of 2009 in areas

potentially impacted by the Project. UVM-CAP completed the Phase 1 study in October, 2009. The investigators found no prehistoric Native American cultural deposits and no significant historic period deposits, and concluded that the proposed project will have no effect on historic properties. VEC has filed a copy of the report with the Vermont Division for Historic Preservation ("DHP") to satisfy DHP's requirements. The State Historic Preservation Officer ("SHPO") will send its findings, when completed, to the Army Corps of Engineers and VEC will submit a copy of SHPO's letter to the Board. Exh. VEC-Schuyler-5; Schuyler pf. at 7; Schuyler supp. pf. at 7.

81. With respect to above-ground historic sites, the line itself is considered an historic resource by the DHP because it is more than 50 years old and was a very early electrification project in Vermont. UVM-CAP also has conducted a Historical Properties Review and Documentation for VEC. Since the historic line must be removed, the Historical Properties Review and Documentation and the archival photographic documentation of the metal towers supporting the line will provide a record that may be archived by the DHP. The only other significant historic structures in the area of potential effect are the old powerhouse and its penstock at the Charleston Dam. The transmission line will pass over the powerhouse but will have no effect on it. The powerhouse is owned by Great Bay Hydro, not VEC. Exh. VEC-Schuyler-6; Schuyler pf. at 7.

82. VEC has taken appropriate mitigation measures to mitigate removal of the historic transmission line by documenting the steel towers and the history of the transmission line. The steel towers have deteriorated to the point that they must be removed in order for VEC to provide reliable electric service and to protect public safety. The Project will not adversely affect the old powerhouse because the new transmission line will pass over it, and the replacement poles are similar in height and size to the existing steel towers. Accordingly, the Project will not have an adverse effect on any historic properties that may be in the viewshed of the Project. Schuyler pf. at 8; exh. VEC-Schuyler-6.

83. VEC will construct the Project in a manner that will protect archaeological resources. The decision to construct the Project in the winter was influenced in part by the identification of numerous archaeologically-sensitive areas along the right-of-way. *Id.*

84. The Project will not have an undue adverse visual impact or an undue adverse effect on aesthetics. The replacement of the existing steel towers and transmission line and the clearing of the right-of-way to a 90-foot width are the visual impacts from this Project. Schuyler pf. at 6; exh. VEC-Schuyler-4.

85. VEC has taken reasonable measures to lessen the visual effects while maintaining a reliable power supply including: (1) reducing the width of the maintained right-of-way from 100 to 90 feet; (2) locating the new line 15 feet to the south of the existing line in most areas, and moving it further from Route 105; (3) using wood poles, which is more in keeping with that expected in a rural setting; (4) selectively retaining and pruning trees when clearing the right-of-way to provide screening for the closest residents and; (5) increasing the height of several structures by 5 to 15 feet at the request of affected landowners in order to raise the conduits above their normal sightlines. Schuyler pf. at 6; exh. VEC-Schuyler-4.

86. No unique or valuable natural areas will be directly impacted by the Project. Schuyler pf. at 25.

87. There is a small area northwest of Sta. 244, near the edge of the right-of-way, which might function as a vernal pool which contains wood frog eggs and other vernal pool organisms. While this area will not be directly impacted by the pole placements, it is partially in the right-of-way and could be adversely impacted by the Project. Revised exh. VEC-Schuyler-2; Schuyler pf. at 25; exh. VEC-Schuyler-13.

88. The most important factor needed to protect this area is to provide shade so that the pool retains water long enough for the tadpoles to develop and for other aquatic organisms unique to this habitat to complete the water-dependent stages of their life cycles. The edge of the vernal pool is just north of the limit of clearing for the right-of-way. Two large willows provide much of the shade for the pool. These trees will be maintained and pruned to prevent danger to the lines. Two large clumps of specked alder will be retained near the southern edge of the pool and an apple tree in the clear zone will also be retained and pruned. This vegetation management plan and the protection of the area, as a wetland area, during construction will preserve the vernal pool and its wildlife functions. Schuyler pf. at 25-26.

89. The Project will not have an adverse impact on critical fish or wildlife habitat. The ANR Environmental Interest Locator did not show critical fish or wildlife habitat at the Project location. The District Wildlife Biologist reviewed the Project and noted no adverse impacts to wildlife. Exh. VEC-Schuyler-7; exh. VEC-Schuyler-14; Schuyler pf. at 26.

90. The 5-year maintenance cycle used on VEC transmission line right-of-ways maintains the vegetation as old field and early successional woodland habitat. This habitat has significant wildlife value. Examples of habitat values provided include nesting and or songbirds, cover and feeding habitat for game birds, habitat for small mammals, and browse areas for deer and moose. The vegetation management practices also provide sufficient cover so that the right-of-way does not become an obstacle to animal movement. Schuyler pf. at 26-27.

91. Since the Project has been designed so that construction equipment will not enter waterways and so that erosion control practices will protect streams from siltation, it will not have an adverse impact on fish populations or other aquatic populations. Schuyler pf. at 27.

92. No threatened or endangered species were identified in the Project right-of-way. Exhibit VEC-Schuyler-12 & 16.

Discussion

Based on the above findings, I find that the proposed project will not have an undue adverse effect on the aesthetics or scenic and natural beauty of the area. In reaching this conclusion, I rely on the Environmental Board's methodology for determination of "undue" adverse effects on aesthetics and scenic and natural beauty as outlined in the so-called Quechee Lakes decision. Quechee Lakes Corporation, 3W0411-EB and 3W0439-EB, dated January 13, 1986.

As required by this decision, it is first appropriate to determine if the impact of the project will be adverse. The project would have an adverse impact on the aesthetics of the area if its design is out of context or not in harmony with the area in which it is located. If it is found that the impact would be adverse, it is then necessary to determine that such an impact would be "undue." Such a finding would be required if the project violates a clear written community standard intended to preserve the aesthetics or scenic beauty of the area, if it would offend the sensibilities of the average person, or if generally available mitigating steps would not be taken to

improve the harmony of the project with its surroundings. The Board's assessment of whether a particular project will have an "undue" adverse effect based on these standards should be significantly informed by the overall societal benefits of the project.²

As the above findings indicate, the Project is to be constructed within VEC's existing easement which has served as the location for a transmission line since the 1920's. Although the Project will result in the relocation of some poles, and increased pole height at some locations, the record shows that these modifications are not significant and were proposed in order to accommodate the concerns of landowners and to lessen or avoid impacting natural areas. In addition, although construction of the Project will temporarily impact certain wildlife and wetland areas along the Project's path, based on the findings above, I conclude that those impacts will not be adverse and that VEC has taken appropriate steps, which includes construction during the winter months, to mitigate any impacts to those natural areas. When viewed in this context, the Project will fit the context of its surroundings and will not have an adverse impact on aesthetics, wildlife habitat, or natural areas. Even if the Project did have an adverse impact on aesthetics, because it replaces an existing 87-year-old transmission line within an existing easement, it will not be shocking or offensive. There is no written community standard prohibiting the replacement of existing transmission facilities when necessary.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

93. The Project will have no permanent impact on public facilities. Lane closures may be required for construction work in close proximity to public roads. Traffic control will be provided by qualified contractors. A permit will be obtained from VTrans for work along Route 105 prior to the start of construction. Schuyler pf. at 27-28.

Public Health and Safety

[30 V.S.A. § 248(b)(5)]

94. The Project will not create an undue adverse effect on public health and safety.

2. Docket 6884, Order of 4/21/04 at 20-21.

Schuyler pf. at 9, 11, 13, 19-20, 23; exh. VEC-Abendroth-5.

Least-Cost Integrated Resource Plan

[30 V.S.A. § 248(b)(6)]

95. VEC's current Integrated Resource Plan ("IRP") was filed with the Public Service Board on July 1, 2008. The Board approved the Transmission and Distribution portion of the IRP on July 31, 2009. The need to upgrade various facilities on the 46 kV transmission system, including the segment between Derby and West Charleston, was addressed at page 11-4 of the IRP. The Project was also identified in VEC's 2004 IRP, which the Board approved on April 5, 2007. VEC and the Department have entered into a Memorandum of Understanding in which the parties agree that VEC should implement the capital projects identified in VEC's ten-year capital improvement plan. This Project is designated for completion in early 2010. Abendroth pf. at 10.

Compliance with Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

96. *Vermont's Twenty-Year Electric Plan* adopted by the Department of Public Service in January of 2005 sets forth several basic objectives that must be satisfied in serving the public interest. Utilities are required to strive to meet these objectives as they design and implement long-range resource plans. Generally these objectives call for the provision of electric service that is "carefully balanced" between the following policy goals: "efficient, adequate, reliable, secure, sustainable, affordable, safe, and environmentally sound, while the state's economic vitality and maintaining consistency with other state policies." The Project strikes a balance between each of these objectives. Specifically, the Project will increase safety and reliability by replacing an aged line with modern components. Abendroth pf. at 10-11.

97. On November 23, 2009, the DPS filed a letter stating that the proposed project is consistent with the *Vermont Twenty-Year Electric Plan*, pursuant to 30 V.S.A. § 202(f), provided the Project is constructed as described by VEC.

Existing or Planned Transmission Facilities

[30 V.S.A. § 248(b)(10)]

98. The Project represents the orderly replacement of existing facilities. It will have no adverse impact on other Vermont utilities or customers because the existing line and its replacement only serve two VEC substations. The Proposed project is not connected to other Vermont utilities. Abendroth pf. at 11.

IV. CONCLUSION

Based upon all the above evidence, and with the conditions I recommend that the Board include as part of the approval of the Project, I conclude that the Project:

- (a) will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, and the recommendations of the municipal legislative bodies;
- (b) 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 and energy efficiency and land management measures;
- (c) will not adversely affect system stability and reliability;
- (d) will result in an economic benefit to the state and its residents;
- (e) will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and §§ 6086(a)(1) through (8) and (9)(K);
- (f) is consistent with the principles of least-cost integrated resource planning;
- (g) is in compliance with the electric energy plan approved by the DPS under § 202 of Title 30 V.S.A.;
- (h) does not involve a facility affecting or located on any segment of the waters of the State that has been designated as outstanding resource waters by the Water Resources Board;

(i) does not involve a waste-to-energy facility; and

(j) can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.

Pursuant to the MOU between all parties to this proceeding, the Parties have waived their rights under 3 V.S.A. § 811 to file written comments or present oral argument with respect to this proposal for decision, provided that this proposal for decision is substantially in the form as that agreed to by the Parties. Because this proposal for decision is substantially in the agreed-upon form, it has not been circulated to the parties.

Dated at Montpelier, Vermont this 31st day of December, 2009.

s/ Jay E. Dudley

Jay E. Dudley
Hearing Officer

V. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that:

1. The findings, conclusions, and recommendations of the Hearing Officer are adopted.
2. The proposed replacement of Vermont Electric Cooperative, Inc.'s ("VEC") 46 kV transmission line and structures between Derby, Vermont, and VEC's West Charleston Substation in Charleston, Vermont, in accordance with the evidence, plans, and other information presented in this proceeding, will promote the general good of the State of Vermont in accordance with 30 V.S.A. Section 248, and a certificate of public good shall be issued in the matter.
3. Prior to proceeding with construction, VEC shall obtain all necessary permits and approvals. Construction, operation, and maintenance of the proposed Project shall be in accordance with such permits and approvals, and with all other applicable regulations, including those of the Vermont Agency of Natural Resources and the U.S. Army Corps of Engineers.

Dated at Montpelier, Vermont, this 5th day of January, 2010.

s/ James Volz)	
)	PUBLIC SERVICE
)	
s/ David C. Coen)	BOARD
)	
)	OF VERMONT
s/ John D. Burke)	

OFFICE OF THE CLERK

FILED: January 5, 2010

ATTEST: s/ Susan M. Hudson _____

Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.