

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7204

Petition of Vermont Electric Cooperative, Inc.,)
for a certificate of public good, pursuant to)
30 V.S.A. § 248(j), authorizing the replacement)
of a transformer at the Cilley Hill Road)
substation in Underhill, Vermont)

Order entered: 9/21/2006

I. INTRODUCTION

This case involves a petition filed on April 20, 2006, by Vermont Electric Cooperative, Inc. ("VEC"), requesting a certificate of public good ("CPG") pursuant to 30 V.S.A. § 248(j) authorizing the replacement of a transformer at its Cilley Road substation located in Underhill, Vermont.

On October 26, 2005, VEC filed a petition under 30 V.S.A. § 248(k) for the emergency replacement of the failed transformer rated at 333 kVA with a larger transformer rated at 833 kVA (the "Project"). On October 26, 2005, in Docket 7112, the Board approved VEC's petition for the emergency replacement of the failed transformer. The replacement transformer was installed on October 26. The Board's approval was subject to the condition that within six months, VEC either remove the larger transformer or apply for Board approval of the larger transformer under 30 V.S.A. Section 248.

On April 20, 2006, VEC filed a petition, prefiled testimony, and proposed findings with the Public Service Board ("Board"), the Vermont Department of Public Service ("DPS") and the Vermont Agency of Natural Resources ("ANR"), as specified in 30 V.S.A. § 248(a)(4)(C), pursuant to the requirements of 30 V.S.A. § 248(j)(2), requesting approval of the larger transformer.

On July 10, 2006, the Board requested that VEC submit additional information regarding the project prior to processing the application. On July 21, 2006, VEC filed supplemental information in response to the Board's request.

Notice of the filing in this Docket was sent on July 27, 2006, to all parties specified in 30 V.S.A. § 248(a)(4)(C) and all other interested persons. The notice stated that any party wishing to submit comments as to whether the petition raises a significant issue with respect to the substantive criteria of 30 V.S.A. § 248 must file their comments with the Board on or before August 25, 2006. Notice of the filing, with a request for comments on or before August 25, 2006, was also published in *The Burlington Free Press* newspaper, on July 28, 2006, and August 4, 2006.

The DPS filed a Determination letter under 30 V.S.A. § 202(f) on August 24, 2006. The letter stated that the proposed project is consistent with the Vermont Twenty-Year Electric Plan for the State.

No other comments have been filed.

The Board has determined that the proposed construction will be of limited size and scope and that the petition has effectively addressed the issues raised with respect to the substantive criteria of 30 V.S.A. § 248. Consequently, we find that the procedures authorized by Section 248(j) are sufficient to satisfy the public interest, and no hearings are required.

II. FINDINGS

1. VEC is a duly organized public service cooperative, subject to the Board's jurisdiction. Petition at 1.

2. VEC owns and operates a 34.5/12.47/7.2 kV distribution substation on Cilley Hill Road in the town of Underhill, Vermont. Abendroth pf. at 2.

3. This substation primarily serves approximately 500 VEC consumer-members in the towns of Essex, Jericho and Underhill. Electrical energy is obtained at 34.5 kV from a Central Vermont Public Service Corporation transmission line that passes near the substation. All power leaves the substation at 12.47/7.2 kV and is consumed entirely by VEC's members located in this geographical area. *Id.*

4. VEC's Underhill Substation has three (3) single-phase transformers to reduce the voltage level from 34.5 kV to 12.47/7.2 kV. The "A" and "C" phase transformers were manufactured in 2003 and are rated at 333 kVA each. The "B" phase transformer was manufactured in 1993 and is rated at 833 kVA. *Id.*

5. On October 25, 2005, one of VEC's 333 kVA transformers in the Underhill substation failed during a storm. VEC had maintained a spare transformer rated at 333 kVA, but the spare was being used in VEC's Jay substation. The only other spare transformers available were rated at 833 kVA or larger. Petition at 2.

6. Load growth in the area served by the Underhill Substation has averaged 2.0% over the last three years, and has been consistent with the population growth in the area served by this substation. (Population Data from the Center for Rural Studies was used for this assessment.) Future load growth is expected to average 2.4% annually, based on VEC's current Integrated Resource Plan ("IRP"). Abendroth pf. at 3.

7. Based on analyses performed for VEC's January 2004 IRP, the capacity of the existing 333 kVA transformer would have been exceeded in the 2013 time frame. VEC has no other locations on its system for which a 333 kVA transformer would be adequate for long-term operation. The next commercially available size transformer is 833 kVA. Over half of the substation transformers on the original VEC system, 26 of 42, are 833 kVA transformers. Given these factors and a desire to minimize the need for spare transformers, a transformer rating of 833 kVA was selected to replace the failed transformer. *Id.* at 4.

8. It is in the best interests of VEC's customers to keep the larger capacity transformer in the substation rather than installing a 333 kVA transformer to replace the failed transformer. *Id.* at 1.

9. The new transformer will enable VEC to continue to provide reliable service to its customers in the Underhill area. Petition at 11.

10. The work performed at the Underhill Substation consisted of the replacement of the existing "A" phase transformer, rated at 333 kVA with a larger transformer rated at 833 kVA. Construction work was limited to the use of a crane to remove the failed transformer from its foundation and to place the new transformer on the existing foundation. *Id.* at 4.

11. The installed cost of the new transformer was approximately \$45,000. The new transformer was purchased in 2005 as a system spare. *Id.*

12. The existing substation does not have oil containment facilities. The substation is not subject to the federal Spill Prevention Control and Countermeasure regulations promulgated in 40 CFR 112, because the total oil inventory of the substation is less than the 1,320 gallon threshold for jurisdiction. *Id.* at 5.

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

13. The project does 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 14-17, below.

14. Pursuant to 30 V.S.A. §248(f), the Chittenden County Regional Planning Commission and the Town of Underhill Planning Commission were notified of VEC's replacement of the failed transformer by letters dated April 14, 2006. Abendroth pf. at 6.

15. The Underhill Town Plan, as adopted in 2004, does not contain any recommendations or land conservation measures contrary to the project. *Id.*

16. The Chittenden County Regional Planning Commission found that the project does not have a substantial regional impact and is in conformance with the 2001 Chittenden County Regional Plan. It also waived the 45-day advance notice requirement for reviewing the project as provided by 30 V.S.A. § 248(f). Letter from Chittenden County Regional Planning Commission filed with the Board on May 17, 2006.

17. The Town of Underhill Planning Commission reviewed the project and supports approval of the project. It also waived the 45-day advance notice requirement for reviewing the project as provided by 30 V.S.A. § 248(f). Letter from Town of Underhill Planning Commission filed with the Board on May 2, 2006.

Need For Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

18. The project is required to meet the need for present and future demand for service by replacing a failed substation transformer. Energy conservation programs and measures and energy efficiency and load management measures will not eliminate the need to replace the transformer. Abendroth pf. at 6; Findings 6-9, above.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

19. Replacement of the failed transformer has not adversely affected system stability and reliability. Abendroth pf. at 6

20. Following replacement of the failed 333 kVA transformer with the 833 kVA transformer, the distribution system load was returned to normal conditions and is operating satisfactorily. Abendroth supp. pf. at 1-2.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

21. The project has resulted in an economic benefit to the state and its residents by replacing a failed substation transformer and restoring the substation to normal operating conditions. Abendroth pf. at 6.

22. VEC presently has only one 333 kVA transformer in its inventory. By utilizing the presently installed standard-sized 833kVA A-phase transformer as a permanent replacement for the failed 333 kVA transformer, VEC avoids the cost of purchasing an additional 333 kVA transformer as a backup unit. Abendroth supp. pf. at 2-3.

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

[30 V.S.A. § 248(b)(5)]

23. The project does 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 24-48, below, which are based on 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. § 1424a(d)]

24. The project is not located on or near any Outstanding Resource Waters. Abendroth pf. at 7.

Water and Air Pollution

[10 V.S.A. § 6086(a)(1)]

25. The project does not result in undue water or air pollution. This finding is supported by Findings 26-27, below.

26. The project did not involve any industrial or manufacturing emissions, excessive dust and smoke during construction, dust or noise from blasting, odors or excessive noise from construction activity, and therefore has not resulted in any undue air pollution. Abendroth pf. at 7.

27. There was no earth disturbance or burning involved with the project. *Id.*

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

28. The project is not located in a headwaters area. *Id.*

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

29. The project as designed meets any applicable health and environmental conservation regulations regarding the disposal of wastes, and does not involve the injection of waste materials or any harmful or toxic substances into ground water or wells. This finding is supported by Findings 30-31, below.

30. All construction debris produced during construction of the project was disposed in an approved landfill. Abendroth pf. at 8.

31. The failed transformer will be repaired or sold to a certified disposal company that will recycle parts of the transformer and dispose of the remainder in an environmentally acceptable fashion. *Id.*

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

32. The project did not require the use of water. *Id.*

Floodways

[10 V.S.A. § 6086(a)(1)(D)]

33. The project is not located on a floodway. *Id.*

Streams

[10 V.S.A. § 6086(a)(1)(E)]

34. The project is not located on or adjacent to any streams. *Id.*

Shorelines

[10 V.S.A. § 6086(a)(1)(F)]

35. The project is not located near any shorelines. *Id.*

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

36. The project is in compliance with the rules of the Water Resources Board relating to significant wetlands since all changes to the substation took place within the existing fenced in area. *Id.* at 9.

Air Pollution

[10 V.S.A. § 6086(a)(1)]

37. The project has not resulted in unreasonable air pollution because replacement of the transformer did not involve any industrial or manufacturing emissions, excessive dust and smoke, or noise from construction activity. *Id.* at 14.

Sufficiency of Water and Burden on

Existing Water Supply

[10 V.S.A. § 6086(a)(2)(3)]

38. The project does not require the use of water and, therefore, did not place a burden on any existing water supply. *Id.* at 9.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

39. The project did not result in unreasonable soil erosion or reduce the ability of the land to hold water. This finding is supported by Finding 40, below.

40. Construction work was limited to the use of a crane to remove the existing transformer and to place the new transformer on the existing foundation. There was no soil disturbance. Abendroth pf. at 9.

Traffic

[10 V.S.A. § 6086(a)(5)]

41. The project has not caused unreasonable congestion or unsafe conditions with respect to transportation systems. This finding is supported by Finding 42, below.

42. The Underhill substation is located off the public roadway, and the transformer replacement did not impede traffic in any way. Abendroth pf. at 9.

Educational Services

[10 V.S.A. § 6086(a)(6)]

43. The project has no impact on the ability of the involved municipality to provide educational services. *Id.* at 10.

Municipal Services

[10 V.S.A. § 6086(a)(7)]

44. The project does not unreasonably burden the ability of any involved municipalities to provide municipal services. *Id.*

**Aesthetics, Historic Sites or Rare
and Irreplaceable Natural Areas**

[10 V.S.A. § 6086(a)(8)]

45. The project does not have an undue adverse effect on the scenic or natural beauty, aesthetics, historic sites or rare and irreplaceable natural areas. This finding is supported by Findings 46-48, below.

46. There is no change in the overall height between the 333 and the 833 kVA transformers. The 333 kVA transformer had a circular base approximately four feet in diameter. The replacement transformer has a square base approximately four feet on each side. Abendroth supp. pf. at 4.

47. The replacement of the failed transformer resulted in no aesthetic change from the prior transformer. Abendroth pf. at 10.

48. The project took place entirely within the existing fenced area of the substation. *Id.*

Necessary Wildlife Habitat and

Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

49. The project does not have an undue adverse impact on any necessary wildlife habitat or known endangered species sites. This finding is based on Finding 50, below.

50. Because the project took place entirely within the fenced area of the existing substation, there was no impact on wildlife habitats or endangered species. Abendroth pf. at 10.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

51. The project does not unnecessarily or unreasonably endanger the public or quasi-public investments in any governmental public utility facilities, services, 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 such facilities, services, or lands. *Id.*

Consistency with Resource Selection

Least-Cost Integrated Resource Plan

[30 V.S.A. § 248(b)(6)]

52. The project is consistent with VEC's Least-Cost Integrated Plan. *Id.* at 11.

Compliance With Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

53. The project is consistent with the 20-Year Electric Plan. *Id.*; Letter of determination from Department filed with the Board on August 24, 2006.

Outstanding Resource Waters

[30 V.S.A. § 248(b)(8)]

54. The project is not located on or near any "Outstanding Water Resource" as designated by the State of Vermont Water Resources Board. Abendroth pf. at 11.

Existing Transmission Facilities

[30 V.S.A. § 248(b)(10)]

55. The project is served economically by existing transmission facilities without undue adverse effect on Vermont utilities or customers. *Id.* at 12.

III. REQUIRED VOTE AND ASSESSMENT OF RISKS AND BENEFITS

VEC is required by Section 248(c) to conduct a vote on the project, and to provide its voters with a written assessment of associated risks and benefits identified by the Board and an assessment of any other risks and benefits determined by VEC.

The benefits associated with the project include replacing a failed substation transformer and restoring the substation to normal operating conditions. The risks associated with the project include any increased costs associated with the replacement of the failed transformer with a larger unit.

IV. CONCLUSION

Based upon all of the above evidence, the construction is of limited size and scope; the petition does not raise a significant issue with respect to the substantive criteria of 30 V.S.A. § 248; the public interest is satisfied by the procedures authorized in 30 V.S.A. § 248(j); and the project will promote the general good of the state.

V. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that the replacement of a failed transformer at the Cilley Road substation in the Town of Underhill, Vermont, in accordance with the evidence and plans submitted in this

proceeding, will promote the general good of the State of Vermont in accordance with 30 V.S.A. § 248, and a certificate of public good to that effect shall be issued in this matter.

Dated at Montpelier, Vermont, this 21st day of September, 2006.

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

OFFICE OF THE CLERK

FILED: September 21, 2006

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.