STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 6794

Petition of Central Vermont Public Service)
Corporation for a certificate of public good, pursuant)
to 30 V.S.A. Sec. 248(j), authorizing: reconstruction)
of 1.5 miles of transmission line within an existing)
transmission corridor; the addition of circuit breakers)
at three existing substations; and the addition of one)
new motor-operated disconnect switch, all located)
within the Town of St. Albans, Vermont)

Order entered: 3/20/2003

I. INTRODUCTION

This case involves a petition filed on August 30, 2002, and an amended petition filed on October 15, 2002, by Central Vermont Public Service Corporation ("CVPS") requesting a certificate of public good ("CPG") under 30 V.S.A. § 248(j). CVPS seeks to reconstruct 1.5 miles of 34.5 kV transmission line within an existing transmission corridor, add circuit breakers at three existing substations, add a new 18 ft. x 24 ft. building at each of two existing substations, and add one new motor-operated disconnect switch at an existing substation, all located within the Town of St. Albans, Vermont.

CVPS has served the petition, the amended petition, prefiled testimony, proposed findings, and a proposed order (along with a prospective CPG) on 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).

Notice of the filing in this docket was sent on January 17, 2003, 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 the comments with the Board on or before February 20, 2003. Notice of the filing, with a request for comments on or before February 20, 2003, was also published in the *St. Albans Messenger* and the *Country Courier* on January 23 and 30, 2003.

The DPS filed a Determination under 30 V.S.A. § 202(f) on February 26, 2003.

No comments were received from any other parties or interested persons.

The Board has reviewed the petition and accompanying documents and agrees that, pursuant to 30 V.S.A. § 248(j), a CPG should be issued without the notice and hearings otherwise required by 30 V.S.A. § 248.

II. FINDINGS

Based upon the petitions and accompanying documents, the Board hereby makes the following findings in this matter.

1. CVPS is a duly organized public service corporation with a principal place of business at 77 Grove Street, Rutland, Vermont. Pet. at 1.

2. CVPS owns and operates electrical distribution and transmission systems in the Town and City of St. Albans. Pet. at 1.

3. The St. Albans area distribution system (which includes approximately 16,000 residential customers, 1,900 commercial customers, and 30 industrial customers) is fed by a CVPS 34.5 kV transmission network that is, in turn, fed by the VELCO 115 kV transmission network. Kirby pf. at 1-2.

4. Major electrical supply sources to the area include connections to the VELCO 115 kV transmission system through dual 115 kV/34.5 kV transformers at the Nason Street Substation and a single 115 kV/34.5 kV transformer at the East Fairfax Substation. In addition, various hydro and diesel facilities provide support. Kirby pf. at 2.

5. A St. Albans area system reliability study performed by CVPS has revealed that the system's exposure to unreliable service is unsatisfactory. There are a number of credible circumstances and contingencies that may cause severe voltage depression or total voltage collapse, leading to an area-wide blackout. In addition, old and sometimes heavily loaded lines

and transformers in the area creates the increased possibility of failure under certain conditions. Kirby pf. at 3-4; exh. LRK-3.

6. To resolve the above concerns, CVPS is proposing to (1) reconstruct 1.5 miles of 34.5 kV transmission line to double circuit construction, (2) install a 34.5 kV circuit breaker at the existing Welden Street Substation, (3) install a 34.5 kV circuit breaker, a motor-operated air break switch and an 18 ft. x 24 ft. building at the North St. Albans Substation, and (4) install a 34.5 kV circuit breaker and an 18 ft. x 24 ft. building at the Nason Street Substation. The proposed buildings will house relays and associated control equipment. Watts pf. at 1-2.

7. The higher speed fault clearing and additional automatic sectionalizing capability of the proposed project will minimize the duration of voltage sags due to power system faults, resulting in better power quality. In addition, the higher speed fault clearing, with a resulting decrease in fault damage, results in a safer power system. Stacom pf. at 2.

8. Out of the several alternative solutions to the potential reliability problems that were considered by CVPS, the proposed solution is considered by CVPS to be the most desirable, taking into consideration the resulting reliability improvement, project cost, public benefit, aesthetic and other environmental impacts. Kirby pf. at 4-7; Upton pf. at 1-9; exh. LRK-3.

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

9. 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 10 through 12, below.

10. The proposed project involves construction for the purpose of increasing system safety and reliability, will take place at existing substations and within existing transmission corridors, and will not significantly impact existing or potential land uses in the region. The proposed project will improve safety, reliability, and power quality in the St. Albans area, providing a more stable and predictable environment for regional land use planning efforts. Upton pf. at 1-2; Upton supp. pf. at 1-2.

11. The proposed project will not impact areas of natural or cultural significance. Upton pf. at 2-8.

12. The proposed project will not impact any land conservation measures included in the St. Albans Town Plan or the St. Albans City Plan. The St. Albans Town Planning Commission, the St. Albans City Planning Commission, and the Northwest Regional Planning Commission reviewed the proposed project and did not make any recommendations. Upton pf. at 1-3.

Need For Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

13. The proposed 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 and energy efficiency and load management measures. This finding is supported by findings 2 through 7, above, and findings 14-22, below. Kirby pf. at 4-22; exh. LRK-3.

14. Peak area loads are approximately 64 Mw in the summer and 57 Mw in the winter. Prior to the summer of 2001, the area was winter-peaking. Peak area load growth has been averaging 3.4% annually over the past five years. Kirby pf. at 2.

15. CVPS considered several options to upgrade the St. Albans area system, including 115 kV and 34.5 kV transmission upgrades, distributed generation ("DG") options, and demand-side management ("DSM") options. Kirby pf. at 4.

16. The 115 kV option was dropped from consideration due to it being unlikely to be cost-justified in terms of its incremental cost and benefits. The DG option was also discarded for the same reasons. Kirby pf. at 5-6.

17. For the DG option to provide any substantial reliability improvement, at least 5 Mw of DG would need to be installed, which is unjustified due to its cost being substantially greater than the transmission upgrade alternative. Kirby pf. at 15.

18. Similarly, at least 5 Mw of DSM would need to occur before any effective reliability improvement could be provided. It is estimated, based up CVPS' Conservation & Load Management Team data, that available DSM in the subject area is substantially less than this amount and would be far too small to be of much benefit. Kirby pf. at 15-16.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

19. The proposed project will not adversely affect system stability and will improve power quality, safety, and reliability for the St. Albans area. See finding 7, above; Stacom pf. at 1-7; Kirby pf. at 11-13; exh. LRK-3.

20. The proposed project provides additional automatic sectionalizing points for the transmission system and results in the increased likelihood of successful automatic reclosing for a temporary fault condition, thus enhancing customer reliability. Stacom pf. at 2.

21. Operating restrictions required by the existing system configuration result in slow relay operating times, causing power quality and equipment damage consequences. Stacom pf. at 7.

22. The proposed 1.5 mile double circuit reconstruction will allow the elimination of a three-way switch at the so-called Radar Tap. As a result, the relay zones of protection will be more manageable, allowing the relay systems to be optimized, and allowing higher speed fault clearing, with its associated reliability benefits. Stacom pf. at 7.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

23. The proposed project will result in an economic benefit to the State. This finding is supported by findings 16-17, above, and 24-27, below.

24. The total construction cost for the proposed project is estimated at approximately $1,300,000 (2002 dollars). Exh. LRK-3.

25. Out of the several alternatives considered, to provide the required system reliability improvements, the proposed project has the lowest net total of capital and loss costs on a twenty-year Present Value Rate of Return basis, at $1.2M. Kirby pf. at 7.

26. The proposed project benefits CVPS's customers because it will ensure system reliability and stability by reducing exposure to potential losses in service. Stacom pf. at 1-7; Kirby pf. at 3-13; exh. LRK-3.

27. The proposed project is an economic benefit to the Town and City of St. Albans by creating a safer and more reliable transmission system for all area residences and businesses. Stacom pf. at 1-5; Kirby pf. at 2-4; exh. LRK-3.

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

[30 V.S.A. § 248(b)(5)]

28. The project as proposed 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 29 through 55, 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)]

29. The proposed project is not located on or near any Outstanding Resource Waters. Upton pf. at 14.

Water and Air Pollution

[10 V.S.A. § 6086(a)(1)]

30. The project as proposed will not result in undue water or air pollution. This finding is supported by findings 31-40, below.

Air Pollution

31. The proposed project will not result in unreasonable air pollution because there will be no emissions from the proposed project. If any clearing is necessary, vegetative materials will be chipped and mulched or disposed of at an approved off site location. No burning will be required for this proposed project. Upton pf. at 4.

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

32. The proposed project is located partially within the Wellhead Protection Area for the Lakewood Park public water supply. The proposed project will not adversely impact the water supply because the only work within the Wellhead Protection Area will be reconstruction of an existing overhead transmission line. Upton pf. at 5.

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

33. The proposed project as designed will meet any applicable health and environmental conservation regulations regarding the disposal of wastes, and will not involve the injection of waste materials or any harmful toxic substances into ground water or wells. This finding is supported by findings 33 and 34, below.

34. There will be no disposal of any waste material into groundwater. Upton pf. at 5.

35. Any construction debris will be disposed of at a state approved landfill. Upton pf. at 5.

Water Conservation

[10 V.S.A. § 6086(a)(1)C]

36. The proposed project will not require the use of water. Upton pf. at 5.

Floodways

[10 V.S.A. § 6086(a)(1)(D)]

37. No construction will take place in a floodway. Upton pf. at 6.

Streams

[10 V.S.A. § 6086(a)(1)(E)]

38. There are no streams associated with the proposed project. The proposed aerial crossing of a drainage ditch will not result in any disturbance within 100 feet of the bank or any impact on vegetative cover. The aerial crossing of a stream adjacent to Nason Street will take place within the existing corridor and streamside vegetation will be retained. Upton pf. at 6.

Shorelines

[10 V.S.A. § 6086(a)(1)(F)]

39. The proposed project is not located on a shoreline. Upton pf. at 6.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

40. There are Class 2 wetlands in the proposed project area. Vermont Wetlands Office staff visited the subject site and determined that the proposed project would not have an impact on wetlands and a Conditional Use Determination is not needed. Upton pf. at 6 - 7.

Sufficiency of Water And Burden on

Existing Water Supply

[10 V.S.A. § 6086(a)(2)(3)]

41. The proposed project will not require the use of water and will not place a burden on any existing water supply. Upton pf. at 5 -7.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

42. The proposed project as designed will not result in unreasonable soil erosion or reduce the ability of the land to hold water. Earth disturbance will be limited to the areas immediately surrounding the poles and adjacent to the existing North St. Albans and Nason Street substations. Upton pf. at 7; exhs. DGW-5 and DGW-7.

Traffic

[10 V.S.A. § 6086(a)(5)]

43. The proposed project will not cause unreasonable congestion or unsafe conditions with respect to transportation systems. Upton pf. at 8.

Educational Services

[10 V.S.A. § 6086(a)(6)]

44. The proposed project will not cause an unreasonable burden on the ability of any of the involved municipalities to provide educational services. Upton pf. at 8.

Municipal Services

[10 V.S.A. § 6086(a)(7)]

45. The proposed project will not place an unreasonable burden on the ability of any of the involved municipalities to provide municipal services. Upton pf. at 8.

Aesthetics, Historic Sites or Rare

And Irreplaceable Natural Areas

[10 V.S.A. § 6086(a)(8)]

46. The project as proposed will 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 47 through 53, below.

47. The proposed project involves the reconstruction, but not relocation, of 1.5 miles of transmission line in an existing transmission corridor, the addition of circuit breakers at three existing substations, and the addition of a motor-operated disconnect switch. In the area of the proposed line construction, poles will increase in height from 35-70 feet to 55-75 feet. Pole heights will be the minimum necessary to achieve required ground clearance. Upton pf. at 9-13; Upton supp. pf. at 1-2.

48. The proposed project will result in only minor changes to existing substations and will utilize an existing transmission corridor for the new circuit. Vegetative screening is proposed to be installed at the Nason Street Substation, resulting in an aesthetic improvement at that location. CVPS requested that a post-construction review of landscaping be conducted with the Board's staff and representatives of the St. Albans Town Selectboard and Planning Commission. Exhs. DGW-3 through 7; Upton pf. at 3,9-13; Upton supp. pf. at 1-2.

49. Little or no clearing will be necessary to accommodate the proposed project. The proposed new circuit will be placed within an existing transmission corridor and, with the exception of angle points, on a single pole line. Upton pf. at 9 - 13; Upton supp. pf. at 1-2.

50. Where transmission lines have existed for decades, upgrades within the existing corridor are consistent with existing uses. Upton pf. at 2.

51. The St. Albans Town Plan calls for the provision of utility services to accommodate future industrial development in the existing industrial park. Upton pf. at 12-13.

52. The proposed project will fit within the context of the area in which it is proposed. Upton pf. at 9-13.

53. There are no known rare or irreplaceable areas in the proposed project area. Nearby buildings of potential historic significance will not be affected by the proposed project. Upton pf. at 13-14; exh. TOU-1.

Discussion

Based on the above findings, the Board finds that this proposed project will not have an undue adverse effect on the aesthetics or scenic and natural beauty of the area. In reaching this conclusion, the Board has relied 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 (January 1986).

As required by this decision, it is first appropriate to determine if the impact of the proposed project will be adverse. The proposed project would have an adverse impact on the aesthetics of the area if its design were 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 whether such an impact would be "undue." Such a finding would be required if the proposed project: (1) violated a clear written community standard intended to preserve the aesthetics or scenic beauty of the area; (2) if it would offend the sensibilities of the average person; or if (3) generally available mitigating steps were not taken to improve the harmony of the proposed project with its surroundings. The Board's assessment of whether a particular project will have an "undue" adverse effect based on these three standards will be significantly informed by the overall societal benefits of the project.[1]

The proposed project will not have an adverse effect on the aesthetics of the area because all construction work will take place at existing substations and within existing transmission corridors. The proposed upgrade of the Fairfax-St. Albans 34.5 kV transmission line within the existing corridor will fit the context of the area, which has included transmission lines for many years, including in the area of residential neighborhoods. In any case, the proposed project does not violate a clear, written community standard, is not shocking or offensive, and is based on a design that makes use of reasonably available mitigation steps. The St. Albans Town Plan foresees further development of the existing industrial park, and local views will include additional industrial development and infrastructure. Where a transmission line has existed for many years, an upgrade of this type without expansion of the utility corridor is to be expected over the course of time and will not be shocking or offensive. CVPS has proposed to make use of existing transmission corridors, has chosen pole heights that are the minimum necessary to

1. The Board will consider, for example, the possible reduction in the need for a powerplant, transmission investments, or other social costs.

provide required ground clearances, and has agreed to improve landscaping and screening at the existing Nason Street Substation at the request of the St. Albans Selectboard.

Necessary Wildlife Habitat and Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

54. The proposed project will not impact any designated natural areas or known endangered species sites. Upton pf. at page 14, and exh. TOU-1.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

55. The proposed facilities will 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. Upton pf. at 14.

Public Health and Safety

[30 V.S.A. § 248(b)(5)]

56. The proposed project will have no adverse effect on public safety. The proposed project shall be constructed in accordance with the requirements of the National Electrical Safety Code. Upton pf. at 12-13; Public Service Board Rule No. 3.500.

Consistency with Resource Selection

Integrated Resource Selection

[30 V.S.A. § 248(b)(6)]

57. The proposed project is consistent with the principals for resource selection in accordance with CVPS' approved least-cost integrated plan. Exh. LRK-3.

Compliance With Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

58. The project as proposed is consistent with the Vermont 20-Year Electric Plan. Kirby pf. at 17-22. The DPS has determined, in a letter dated February 26, 2003, that the proposed project is consistent with the Vermont 20-Year Electric Plan in accordance with 30 V.S.A. § 202(f),

provided that the actions of CVPS in this matter are consistent with the petition and testimony. DPS Section 202(f) Determination.

Outstanding Water Resources

[30 V.S.A. § 248(b)(8)]

59. No designated Outstanding Resource Waters will be affected by the proposed project. Upton pf. at 14-15.

Existing Transmission Facilities

[30 V.S.A. § 248(b)(10)]

60. The proposed project can be served economically by existing transmission facilities without undue adverse effect on Vermont utilities or customers. Exh. LRK-3.

III. CONCLUSION

Based upon all of the above evidence, the proposed construction will be 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 proposed project will promote the general good of the state.

IV. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that the reconstruction of 1.5 miles of 34.5 kV transmission line within an existing transmission corridor, the addition of circuit breakers at three existing substations, the addition of a new 18 ft. x 24 ft. building at each of two existing substations, and the addition of one new motor-operated disconnect switch at an existing substation, all located within the Town of St. Albans, Vermont, will promote the general good of the State of Vermont in accordance with 30 V.S.A. § 248, and a certificate of public good shall be issued in this matter.

Dated at Montpelier, Vermont, this 20th day of March, 2003.

s/Michael H. Dworkin)	
)	PUBLIC SERVICE
)	
s/David C. Coen)	BOARD
)	
)	OF VERMONT
s/John D. Burke)	

OFFICE OF THE CLERK

FILED: March 20, 2003

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: Clerk@psb.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.