

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 6637

Petition of Washington Electric Cooperative, Inc. for)
a certificate of public good authorizing the)
construction of a new substation to replace the)
existing South Walden substation, the reconstruction)
of an existing 12.5 kV transmission line, and the)
relocation of a 34.5 kV transmission line which will)
serve the new substation, all located in the Town of)
Walden, Vermont)

Hearing at
Montpelier, Vermont
March 26, 2002

Order entered: 4/9/2002

PRESENT: Peter B. Meyer, Hearing Officer

APPEARANCES: Joshua R. Diamond, Esq.
Diamond & Robinson, P.C.
for Washington Electric Cooperative, Inc.

Aaron Adler, Special Counsel
for Vermont Department of Public Service

Warren Coleman, Esq.
for Agency of Natural Resources

I. INTRODUCTION

This case concerns a petition filed by Washington Electric Cooperative, Inc. ("WEC") on February 8, 2002, requesting a certificate of public good ("CPG") under 30 V.S.A. § 248 to construct a substation in the Town of Walden, Vermont, to replace an existing substation that is aged, deteriorating, and inefficient. The petition also seeks to reconstruct three sections of the existing 12.5 kV three-phase distribution line to accommodate the relocation of the 34.5 kV transmission line which will serve the new substation.

On March 19, 2002, a public hearing was held in Hardwick, Vermont. Notice of the public hearing was sent to all parties and interested persons on February 21, 2002. In addition, notice of the public hearing was published in The Times-Argus newspaper on February 27, and March 6, 2002, and in the Hardwick Gazette on March 6, 2002. The public hearing was held as

scheduled at 5:00 P.M. at the Hardwick Municipal Building, General Meeting Room, Hardwick, Vermont. Also on March 19, 2002, a site visit was held at the substation site in Walden, Vermont.

On March 21, 2002, WEC and the Vermont Department of Public Service ("DPS"), and the Agency of Natural Resources ("ANR") filed a Stipulation in which the three parties agreed that the Board should issue a CPG with conditions. The specific conditions contained in the Stipulation are described in the findings below.

A technical hearing was held as scheduled on March 26, 2003, at 9:30 A.M. at the Public Service Board Hearing Room, Chittenden Bank Building, 112 State Street, Montpelier, Vermont. Notice of the technical hearing was sent on March 7, 2002, to all parties specified in 30 V.S.A. § 248 and all interested parties. No one appeared in opposition to the petition and substantial evidence was presented in support of the petition.

II. FINDINGS

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

1. WEC is a duly organized public service cooperative with its principal place of business in East Montpelier, Vermont. Pet. at 1.
2. WEC owns and operates a substation in South Walden, Vermont, which provides electrical service to residents and businesses in the towns of Walden, Danville, Woodbury, Hardwick, Greensboro and Wheelock. Weston pf. at 7.
3. The proposed project under consideration involves the replacement of the existing substation located at 149 Cabot Road, one quarter mile south of the intersection of Route 15 and Cabot Road (Town Highway #1), in the Town of Walden. Kischko pf. at 3.
4. The existing substation must be replaced because the wood structure has deteriorated beyond reasonable economic repair. It lacks adequate, safe working clearances to energize live parts, and lacks the necessary oil containment system. The substation has reached the end of its useful life cycle. Kischko pf. at 4.
5. The project will be built on an adjacent 1.9 acre site situated within WEC's existing 12.5 kV distribution corridor. The project will consist of replacing the existing wooden

substation with a compact steel structure. New 1250 KVA low-loss power transformers, individual circuit regulation, remote monitoring, and single phase protection will be utilized. The proposed substation will be built within an 8,000 square-foot fenced-in area to allow for proper clearances, as well as the ability to place a portable substation beneath the 34.5 kV transmission line in the event of a substation transformer failure. Kischko pf. at 5, 6; exhs. WEC D, C1, & C2.

6. On March 21, 2002, WEC, the DPS and the ANR submitted a Stipulation, in which the parties agree that the Board should issue a CPG for the proposed Project provided that all of the terms of the Stipulation are met. Exh. Joint 1 at 2.

7. In the Stipulation, the parties agree that the Board should include the following conditions in a CPG for the project:

(a) WEC will include no-load loss, load loss, and cost multipliers in the bid package it will provide to vendors for the proposed substation's power transformers. WEC will develop these multipliers using the same spreadsheet procedures agreed upon between WEC and the DPS in Docket No. 6347 and referenced in Condition No. 3 of the CPG issued in that docket. The spreadsheet procedure's avoided cost inputs shall be those developed in consultation with the DPS.

(b) Within a year of the date on which construction of the proposed substation is complete, WEC will remove the existing South Walden substation, and reclaim and plant grass on the site of the existing substation.

(c) WEC shall erect silt fencing at the limits of the area to be disturbed during construction to minimize impacts to the Class III wetland area (which is described in Finding No. 29, below) and use appropriate practices for erosion control and site management, consistent with the Vermont Handbook for Soil Erosion and Sediment Control on Construction Sites (available from ANR).

(d) WEC will seed disturbed areas following construction activity with an annual grass to allow for the return of native vegetation to the site.

(e) WEC will limit the clearing of trees to only those necessary for routing of lines to and from the new substation facility, generally located southwest of the substation site. No clearing shall take place in the mapped deeryard area, located to the south and east of the substation site.

Exh. Joint-1 at 3.

8. The Stipulation contains other provisions, including but not limited to, provisions relating to WEC's providing the DPS and ANR with copies of, and the DPS' and ANR's opportunity to comment on, all filings made under the Stipulation, as well as provisions relating to the Stipulation's ineffectiveness if it is not approved in its entirety, its non-precedential nature, and the parties' acknowledgment of the Board's continuing jurisdiction to resolve disputes arising under the Stipulation. Exh. Joint-1, at 4-9.

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

9. The proposed substation 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 Town of Walden has not submitted any objections to the proposed substation. The regional planning commission has no objections, and it has waived the 45-day advance notice requirement for reviewing the project as provided by 30 V.S.A. § 248(f). Rice pf. at 3, 4; Weston pf. at 8; exhs. WEC 3 & 4.

11. The proposed substation will be built on a site which is approximately 500 feet from the existing substation, and within WEC's existing distribution corridor. It will not have any unduly adverse impacts upon ecological or sensitive/fragile areas. Rice pf. at 11-13, 12; exhs. WEC C1, C2, 6, 7, & 8.

12. The new substation will provide for the current needs of the residents and businesses in the Town of Walden and surrounding areas. It will also allow for additional electrical capacity to accommodate the combined loads of the South Walden and West Danville substations, providing improved continuity of service during planned and unplanned outages. The new substation will also allow for additional electrical capacity to accommodate new development in the region. Weston pf. at 7-8.

Need for Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

13. The proposed substation is required to meet 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. Weston pf. at 2-3; exh. WEC 1. This finding is further supported by findings 3 through 5, above.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

14. The proposed project will not adversely affect system stability. Kischko pf. at 6. Reliability to customers served by the substation will be further enhanced by the implementation of recommendations resulting from a load flow analysis currently being conducted pursuant to a stipulation with the DPS negotiated in conjunction with regulatory approval for financing of WEC's 2001-2004 Construction Work Plan (PSB Docket #6405). Weston pf. at 3, 4; exh. WEC 2; exh. Joint 1 at 3.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

15. The total cost for the construction of the substation is estimated at \$420,000. Weston pf. at 5.

16. The project will have an economic benefit to the State by reducing the number and duration of outages to approximately 1,600 residential and business members served by the South Walden and West Danville substations. Weston pf. at 7.

Aesthetics, Historic Sites, Air and

Water Purity, the Natural Environment and Public

Health and Safety

[30 V.S.A. § 248(b)(5)]

17. The new substation 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 18 through 46, below, which are based on the criteria specified in 10 V.S.A. §§ 1424 a(d) and 6086(a)(1) through (8) and (9)(K). Rice pf. at 4.

Outstanding Resource Waters

[10 V.S.A. § 1424a (d)]

18. The project will not affect any outstanding resource waters of the State as identified by the Water Resources Board. This finding is supported by findings 19 through 29, below.

Water and Air Pollution

[10 V.S.A. § 6086(a)(1)]

19. The new substation will not result in undue water or air pollution. The project does not involve industrial/manufacturing emissions, vehicle exhaust at congested intersections, excessive dust and smoke during construction, or processing or storage of radioactive materials. There will be no additional impervious areas to increase peak runoff from the site. The new substation footprint will have a crushed stone surface that will absorb initial rainfall and slowdown runoff from extended storms. Drainage swales around the footprint will collect runoff and insure that the preexisting drainage patterns remain the same. In addition, the new transformer and regulator foundations are designed to collect and store the total volume of the transformer liquid in the event of any leakage incident. Rice pf. at 4-5. This finding is further supported by findings 20 through 30, below.

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

20. There will be no undue adverse impact of headwaters. The project will not involve lands that are directly located in headwaters of watersheds, and it will be located below 1500 feet in elevation. The implementation of erosion control measures during construction of the substation, such as a silt fence, the placement of hay bale dams, and stone lined ditches will prevent wetland fill. Rice pf. at 6; exhs. WEC 5, C1, & C2.

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

21. The project as designed will meet the 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 22 through 24, below.

22. There will be no discharge of any substance to surface or groundwater, either direct

or indirect. Rice pf. at 7.

23. All construction debris will be disposed of at a State-approved landfill or recycled where possible. Id.

24. The new substation will contain an oil pit containment system. Any leak from a transformer will be collected in an impervious pit and piped to an underground oil/water separator tank. The transformer liquids or oil will be disposed of off-site. Rice pf. at 7; exh. WEC C1.

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

25. The project will not utilize a significant supply of water. Rice pf. at 7.

Floodways

[10 V.S.A. § 6086(a)(1)(D)]

26. The project will not be located on a floodway. Rice pf. at 7-8.

Streams

[10 V.S.A. § 6086(a)(1)(E)]

27. The site of the proposed project is more than 500 feet away from Perkins Meadow Brook. There will be no undue adverse impact to the stream. Rice pf. at 8; exhs. WEC 6 & 8.

Shorelines

[10 V.S.A. § 6086(a)(1)(F)]

28. The project will not be located near any shorelines. Rice pf. at 8.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

29. There are Class III wetlands in the general vicinity of the substation site. The erection of silt fencing at the limits of the area to be disturbed during construction and the use of appropriate practices for erosion control and site management, consistent with the Vermont Handbook for Soil Erosion and Sediment Control on Construction Sites, will prevent any undue adverse impact upon the wetlands. Rice pf. at 8; exhs. WEC 5, Joint-1 at 3c.

Air Pollution

[10 V.S.A. § 6086(a)(1)]

30. The project will not result in unreasonable air pollution because there will be no emissions from the new substation. Rice pf. at 4, 5.

Sufficiency of Water And Burden on Existing Water Supply

[10 V.S.A. § 6086(a)(2) & (3)]

31. The project will not require significant amounts of water, and it will not place a burden on any existing water supply. Rice pf. at 9.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

32. The new substation will not result in unreasonable soil erosion or reduce the ability of the land to hold water. This finding is supported by findings 33 through 35, below.

33. Soil disturbance during construction will be minimal on this level and naturally cleared site. Disturbed areas will be surrounded by silt fencing and hay bale barriers will be placed in drainage swales to minimize erosion. The Stipulation requires the use of appropriate practices for erosion control and site management consistent with the Vermont Handbook for Soil Erosion and Sediment Control on Construction Sites, as well as seeding disturbed areas with annual grass to allow the return of native vegetation to the site. Rice pf. at 10; exh. WEC D1.

34. Since much of the proposed site consists of an existing natural clearing, there will be no new impervious areas to increase peak runoff from the site. Rice pf. at 10; exh. WEC C1.

35. The substation footprint will have a crushed stone surface that will detain runoff from extended storms. Rice pf. at 10; exh. WEC C1.

Traffic

[10 V.S.A. § 6086(a)(5)]

36. The project will not cause unreasonable congestion or unsafe conditions with respect to transportation systems. There is no regular traffic from Cabot Road to the site where the new substation will be located. There will be a very minimal increase in traffic on Cabot Road during the construction period. Rice pf. at 10; Weston pf. at 9.

37. No other means of transportation will be affected by the project. Rice pf. at 10.

Educational Services

[10 V.S.A. § 6086(a)(6)]

38. The project will not cause an unreasonable burden on the ability of any of the involved municipalities to provide educational services. Rice pf. at 11; Weston pf. at 8.

Municipal Services

[10 V.S.A. § 6086(a)(7)]

39. The project will not place an unreasonable burden on the ability of any involved municipalities to provide municipal services. Rice pf. at 11; Weston pf. at 9.

Aesthetics, Historic Sites or Rare

And Irreplaceable Natural Areas

[10 V.S.A. § 6086(a)(8)]

40. 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 41 through 45, below.

41. The proposed site is wooded on two sides, and the proposed substation construction will preserve the existing tree buffer between the road and the substation. WEC has agreed to a site visit upon completing the construction of the substation structure to determine whether additional landscaping is needed to complement the existing trees and provide additional visual screening. WEC will notify the Board no later than 30 days after construction of the substation structure has been completed. Rice pf. at 12; tr. at 15-17; exhs. WEC C1 & C2.

42. Substation lighting will consist of motion sensor-activated lights near the substation gate, as well as switch-activated lighting to be used only during service calls. The substation will not be illuminated during normal operation. Tr. at 14-15.

43. There are no historic or archeological sites that will be affected by the project. Rice pf. at 13; exh. WEC 7.

44. There will be no adverse impact upon rare and irreplaceable natural areas. Rice pf. at 13; exh. WEC 6.

45. WEC will completely remove the existing substation from the site upon completion of the new substation and transmission lines, and it will seed all disturbed areas following construction activity with an annual grass to allow for the return of native vegetation to the site.

Exh. Joint-1 at 3d.

Discussion

Based on the above findings, I find that this project will not have an undue adverse effect on the aesthetics or scenic and natural beauty of the area. In reaching this conclusion, I have relied on the Environmental Board's methodology for the 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 3WO439-EB, dated January 13, 1986.

Under 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 whether 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.

Given the facts of this case, it would be difficult to find that this project will have an adverse effect on the aesthetics of the area because the site of the proposed project is beyond an existing wooded area, which will naturally screen the substation from public view. Some landscaping may be added to complement the existing trees and to provide additional visual screening. Even if the Board found this proposal adverse, it would not be able to find that such an adverse impact is undue because there is no written community standard that will be violated, the project will not offend the sensibilities of the average person, and WEC has proposed to take all reasonable available mitigating steps to improve the harmony or fit of the project with the surroundings.

Necessary Wildlife Habitat and

Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

46. The new substation will not impact any necessary wildlife habitats. There will be no clearing in the vicinity of the mapped deeryard area. Rice pf. at 13; exh. WEC 6; *see* finding 7, above.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

47. The proposed substation 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 the public's use or enjoyment of or access to such facilities, services, or lands. The project will not impact such facilities, services or lands. Rice pf. at 13.

Consistent With The Least-Cost Integrated Plan

[30 V.S.A. § 248(b)(6)]

48. The project as proposed is consistent with WEC's Least-Cost Integrated Plan. Weston pf. at 2; exh. WEC 1.

Compliance With Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

49. The project as proposed is consistent with the 20-Year Electric Plan because WEC will (1) include no-load loss, load loss, and cost multipliers in the bid package it will provide to vendors for the proposed substation's power transformers, and (2) incorporate the recommendations resulting from a load flow analysis conducted pursuant to a stipulation with the Vermont Department of Public Service. Weston pf. at 2-4; exhs. WEC 2, Joint-1 at 3(a), DPS 1.

Outstanding Water Resources

[30 V.S.A. § 248(b)(8)]

50. No waters of the State that might be designated as Outstanding Resource Waters will be affected by the project. *See*, findings 18 *et seq.*, above.

Existing Transmission Facilities

[30 V.S.A. § 248(b)(10)]

51. This project can be served economically with minimal modification to the existing transmission facilities. There will be no undue adverse effect on Vermont utilities or customers. A portion of the existing transmission line located along and adjacent to 149 Cabot Road will be rerouted into an existing three-phase distribution corridor that already serves the proposed site. Weston pf. at 4-5; exh. WEC 3.

Conclusion

Based upon all the above evidence, the proposed 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 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; and
- (i) can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.

Accordingly, I recommend that the Board issue a CPG for the proposed Project.

To the extent these findings are inconsistent with any proposed findings, such proposed findings are denied.

The parties have waived the opportunity to comment on this Proposal for Decision in accordance with 3 V.S.A. § 811.

DATED at Montpelier, Vermont, this 5th day of April, 2002.

s/Peter B. Meyer

Peter B. Meyer
Hearing Officer

III. ORDER

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

1. The construction of a new substation in Walden, Vermont, by Washington Electric Cooperative, Inc., 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.

2. The Stipulation, filed by Washington Electric Cooperative, Inc., the Vermont Department of Public Service, and the Agency of Natural Resources on March 21, 2002, concerning the substation facility is accepted and approved.

DATED at Montpelier, Vermont, this 9th day of April, 2002.

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

OFFICE OF THE CLERK

Filed: April 9, 2002

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 mail) 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.