STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 6823

Petition of Green Mountain Power Corporation)
("GMP") for a certificate of public good, pursuant to)
30 V.S.A. § 248(j), authorizing the reconstruction and)
upgrade of an 0.5-mile segment of its 3314)
transmission line between GMP's Town Line)
Substation #44 located in Williston, Vermont, and)
GMP's Digital Substation #43 located in South)
Burlington, Vermont)

Order entered: 5/9/2003

I. INTRODUCTION

This case involves a petition filed on March 10, 2003, by Green Mountain Power Corporation ("GMP") requesting a certificate of public good ("CPG") under 30 V.S.A. § 248(j) authorizing the reconstruction and upgrade of an 0.5-mile segment of its 3314 transmission line between GMP's Town Line Substation #44 located in Williston, Vermont, and GMP's Digital Substation #43 located in South Burlington, Vermont.

Pursuant to the requirements of 30 V.S.A. § 248(j)(2), GMP has served the 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). The petitioner filed supplemental prefiled testimony on March 27, 2003.

By letter dated February 10, 2003, GMP notified the Chittenden County Regional Planning Commission, the Williston Planning Commission and the South Burlington Planning Commission of the proposed project with a request that each advise GMP and the Board as to whether the project will unduly interfere with the orderly development of the region. GMP advised the Chittenden County Regional Planning Commission and the South Burlington Planning Commission of a correction to the number of poles in the project by letter dated March 3, 2003. The Williston Planning Commission was also advised of that correction at their meeting on

March 4, 2003, with a confirmatory letter dated March 5, 2003. A representative of GMP met with the Williston Planning Commission at their meeting on March 4, 2003, and with the South Burlington Planning Commission on March 11, 2003. Each of the Planning Commissions responded, waiving the 45-day notice provision, and none indicated a problem with the project.

Notice of the filing in this docket was sent on April 1, 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 May 2, 2003. Notice of the filing, with a request for comments on or before May 2, 2003, was also published in the *Burlington Free Press* on April 4 and April 11, 2003.

The DPS filed a Determination under 30 V.S.A. § 202(f) on May 6, 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 petition and accompanying documents, the Board hereby makes the following findings in this matter.

1. GMP proposes to reconstruct and upgrade the 0.5-mile segment of the 34.5 kV 3314 line between Town Line Substation #44 and Digital Substation #43. The project will increase the conductor size in order to sustain a first contingency condition and will reduce the losses on the segment being reconstructed. GMP proposes to increase the conductor rating from a nominal 529 amps (Linnet) to a nominal 907 amps (Drake). Cecchini pf. at 1-2.

2. The Town Line Substation is located on the north side of Williston Road on the Williston side of the Williston-South Burlington town line, which is approximately the course of Muddy Brook. The proposed reconstruction project has one new transmission pole and one new distribution pole in Williston, with the remainder of the project in South Burlington. After crossing the town line into South Burlington, the line is located in the commercial development

between Gregory Drive and Muddy Brook until it crosses Shunpike Road. On the South side of Shunpike Road, the project proceeds through the Technology Park Associates' field bounded by Community Drive and Muddy Brook to the Digital Substation. Cecchini pf. at 2.

3. Normally the 3314 line segment between Digital and Town Line substations carries load that is well within its present rating. However, when the VELCO K-33 line source is lost (a first contingency situation that eliminates the Queen City sources from the 34.5 kV system), the 3314 line must carry a substantial additional load generated by the McNeil Station. In the summer of 2003, GMP is projecting over 1000 hours of exposure to a K-33 contingency when this load would exceed the short-term emergency rating (600 amps) of the conductor based on projected Chittenden County area load in excess of 135 MW. Cecchini pf. at 2-3; Cecchini supp. pf. at 4.

4. The proposed 3314 line reconductoring in conjunction with the running of McNeil is the best short-term option to protect the system from a first contingency loss of load due to a VELCO K-33 line outage until the proposed Tafts Corner Digital Injection[1] project is constructed. The risk of loss of load for the K-33 contingency in 2003 with the 3314 line not reconductored is 1.5%. Cecchini supp. pf. at 3-4.

5. If the proposed reconductoring is not complete by May 15, 2003, GMP will institute a procedure to manually trip the 43G4 feeder (chosen on the basis of load relief capability due to location and the magnitude of load served) for the 3314 line segment overload. This feeder carries 4 to 5 MW at peak and serves the load along Vt. Route 2 in the vicinity of Tafts Corner, Tafts Corner Commercial Park (Wal Mart area), and Alling Industrial Park. With no mitigating circumstances, the load would be out for an estimated three to sixteen hours depending on the severity of the K-33 contingency and the amount of sectionalizing required due to the cold load pick-up phenomena. Cecchini supp. pf. at 4.

6. System stability and reliability will be improved by the proposed project. If the loss of the VELCO K-33 line occurs during peak periods without the proposed improvement, at least

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1. Docket No. 6839, Joint Petition of Vermont Electric Power Company, Inc, Green Mountain Power Corporation, and Vermont Electric Cooperative, Inc. for certificates of public good pursuant to 30 V.S.A. § 248 authorizing construction of the Tafts Corner 155/34.5 substation and construction and improvements to 34.5 kV transmission lines in Williston and South Burlington, Vermont, filed on April 1, 2002.

4000 kW of load could be lost. That loss could, and likely would, have an adverse impact to public health and safety from such consequences as loss of traffic lights and other critical electric powered infrastructure in a highly developed and commercial area. Cecchini supp. pf. at 4.

7. Conservation measures to reduce the potential load on the 3314 line by 4000 KW by this summer are not possible in this high growth area. It takes a minimum of two years to capture that amount of savings even where there is enough energy efficiency potential available to do so. Moreover, because the direct costs for energy conservation of this magnitude are extremely high as compared to the cost of the line upgrade, conservation would not be cost-effective. Using information contained in the recent VELCO study that assessed the energy efficiency potential for the Northwest region of Vermont, it is estimated that the direct cost to reduce summer load through energy efficiency would be $3,500 per KW saved. Thus, the total cost to reduce load by 4000 KW would be $14 million as compared to the $115,000 for the line upgrade. Finally, the long daily peaks in demand served by the 3314 line make load control a poorly suited alternative to the line upgrade. Cecchini supp. pf. at 3.

8. GMP chose Drake as the appropriate conductor size because the next smaller standard size (Elgin) does not have the nominal capacity to handle the documented peak contingency load. The next larger standard size (Rail) was not chosen because it requires a significant increase in pole height and/or additional poles. Cecchini pf. at 3.

9. The change in conductor size necessitates pole replacement because a larger conductor requires either taller or more poles to maintain the same conductor to ground clearances. Cecchini pf. at 3.

10. There are presently nine transmission poles between Digital and Town Line Substations, four of which have 43G4 distribution underbuild. There are also nine dedicated distribution poles for the 43G4 between the Digital and Town Line Substations. One of the transmission poles is located adjacent to Muddy Brook. Cecchini pf. at 3.

11. For this project, the total number of transmission poles will increase by one, from nine to ten. (One pole eliminated and two added). New poles will generally replace existing poles one for one in essentially the same locations except for the addition of one pole because of the exceptionally long span in the field between the Digital Substation and Shunpike Road and the

other because of the elimination of the pole adjacent to Muddy Brook. Two poles will be twenty feet taller and three poles will be each fifteen, ten and five feet taller than their replacements. No additional rights of way will be required for the poles being relocated. Cecchini supp. pf. at 5; Cecchini pf. at 4.

12. The primary distribution poles were reduced from nine to five. (Five eliminated and one added.) One of the poles eliminated from primary distribution service will remain because it is also a secondary service pole. The additional distribution pole is just outside the Digital Substation. Two distribution poles will be five feet taller than their replacements. Cecchini pf. at 4.

13. The project provides environmental and aesthetic benefits by consolidating the transmission and distribution facilities between the two substations, reducing the number of distribution poles from nine to five and by eliminating the transmission pole and associated push brace at the edge of Muddy Brook. Cecchini pf. at 4-6.

14. Because pole locations are not being significantly changed and the increase in some pole heights and the net increase of one transmission pole will be offset by the elimination of four distribution poles, the overall aesthetic impact should be minimal. In addition, the aesthetic impact is minimized by the project's location in a commercially developed area and its off-road location making the project generally less visible. Cecchini pf. at 3-4.

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

15. The project will allow the VELCO system to sustain a first contingency condition and thus, will enhance power reliability and 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 the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. Cecchini pf. at 6; Findings Nos. 1 through 6, above.

Need For Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

16. The project will allow the VELCO system to sustain a first contingency condition due to a loss of the VELCO K-33 line which could result in interruption of approximately 4000 KW of load. For the reasons set forth in Finding No. 7, above, including that the total cost of energy efficiency measures to reduce load by 4000 KW could be $14 million as opposed to the cost of the reconductoring of $115,000, the project is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost effective manner through conservation programs and measures and energy efficiency and load management measures. Cecchini pf. at 2-3 and supp. pf. at 3.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

17. The project, for the reasons discussed above, will enhance and will not adversely affect system stability or reliability. Cecchini pf. at 2-3 and supp. pf. at 3-4; Findings 1, 3-6, above.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

18. By enhancing GMP's system stability and reliability, at a cost of approximately $115,000, the project will result in an economic benefit to the state and its residents. Cecchini pf. at 2-4 and supp. pf. at 5.

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

[30 V.S.A. § 248(b)(5)]

19. 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 1 through 15, above, and Findings 20 through 37, below, which are based on the criteria specified in 10 V.S.A. §§ 1424(a)(d) and 6086(a)(1) through (8), (8)(A)and (9)(K).

20. 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.

Outstanding Resource Waters

[10 V.S.A. § 1424a(d)]

21. There are no watercourses in the vicinity of the project that have been designated as outstanding resource waters. Cecchini pf. at 5.

Water and Air Pollution

[10 V.S.A. § 6086(a)(1)]

22. The project will not produce any emissions or waste and, accordingly, will not result in undue water and air pollution. Cecchini pf. at 5. This finding is also supported by the specific findings under the criteria of § 6086(a)(A) through (G), below.

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

23. Based on its location, the project will not have an undue adverse impact on any headwaters. Cecchini pf. at 5.

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

24. Because the project will not result in the production of any wastes, it will meet all applicable health and Environmental Conservation Department regulations for the disposal of wastes, and will not involve the injection of waste materials or any harmful or toxic substances into ground water or wells. Cecchini pf. at 5.

Water Conservation

[10 V.S.A. § 6086(a)(1)C]

25. The project will not utilize water during or after construction, and, accordingly, the criteria specified in 10 V.S.A. § 6086(a)(1)(C) relating to water conservation is inapplicable. Cecchini pf. at 5.

Floodways

[10 V.S.A. § 6086(a)(1)(D)]

26. The 3314 line is not located on a floodway. Cecchini pf. at 5.

Streams

[10 V.S.A. § 6086(a)(1)(E)]

27. Muddy Brook is located near the project. That brook and its riparian buffer will be improved by the elimination of the pole and push brace currently located at the edge of the brook. Cecchini pf. at 4-6.

Shorelines

[10 V.S.A. § 6086(a)(1)(F)]

28. The proposed project is not located on a shoreline. Cecchini pf. at 5.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

29. The project will not impact and thus not result in an undue adverse impact on wetlands. Cecchini pf. at 5.

Sufficiency of Water And Burden on Existing Water Supply

[10 V.S.A. § 6086(a)(2)(3)]

30. The project does not require water to function and so will not use any significant amounts of water and will not place a burden on any existing water supply. Cecchini pf. at 5.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

31. Because any excavation required for installation will be restored with appropriate seeding and mulching or other mitigation for soil erosion, the project will not result in unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result. Cecchini pf. at 5.

Traffic

[10 V.S.A. § 6086(a)(5)]

32. Because of the off road location of the project, it will not cause unreasonable congestion or unsafe conditions with respect to the use of highways, waterways, railways, airports and airways and other means of transportation existing or proposed. Cecchini pf. at 5.

Educational Services

[10 V.S.A. § 6086(a)(6)]

33. The project is unrelated to and, thus, will not cause any burden on the ability of any municipality to provide educational services. Cecchini pf. at 1 and 2.

Municipal Services

[10 V.S.A. § 6086(a)(7)]

34. The project will not require any municipal or governmental services. Cecchini pf. at 5.

Aesthetics, Historic Sites or Rare

And Irreplaceable Natural Areas

[10 V.S.A. § 6086(a)(8)]

35. Because of the limited size changes of the poles, the same general location as the existing 3314 line, the developed character of the region, and the elimination of four distribution poles, the project will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, or rare and irreplaceable natural areas. This finding is supported by Findings 11-14 above; and Cecchini pf. at 5.

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.[2]

The proposed project will not have an adverse effect on the aesthetics of the area because all construction work will take place within the existing transmission and distribution corridors and the improvements will fit the context of the area, which is characterized by commercial development including transmission and distribution lines. In any case, the proposed project will not violate a clear, written community standard, it is not shocking or offensive, and it is based on a design that makes use of reasonably available mitigation steps.

Necessary Wildlife Habitat and Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

36. Because the location of the line is not being significantly changed and it is in an existing developed area, the project will not significantly destroy or significantly imperil necessary wildlife habitat or any endangered species. The elimination of the current pole on the edge of Muddy Brook may improve wildlife habitat. Cecchini pf. at 5.

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

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

37. The project will not unnecessarily or unreasonably endanger the public or quasi-public investment in the facilities listed in 10 V.S.A. § 6086(a)(9)(K), 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. Cecchini pf. at 1-6.

Compliance with Executive Order #52 – Agricultural Land

38. Because its location is not being materially changed and is in a developed area, the project will have no effect on any prime agricultural soils. Cecchini pf. at 5.

Consistency with Resource Selection

Integrated Resource Selection

[30 V.S.A. § 248(b)(6)]

39. Based on Findings 1-5, above, the project is consistent with the principles for resource selection expressed in GMP's approved least-cost Integrated Resource Plan.

Compliance With Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

40. Because the project will result in GMP being able to sustain a first contingency condition, the project is consistent with the Vermont Twenty-Year Electric Plan, in accordance with 30 V.S.A. § 202(f). Findings 1-4, above. Letter from the Department of Public Service, dated May 6, 2003.

Outstanding Water Resources

[30 V.S.A. § 248(b)(8)]

41. No waters of the state that might be designated as Outstanding Resource Waters will be affected by the project. See Finding 21, above.

Existing Transmission Facilities

[30 V.S.A. § 248(b)(10)]

42. The project is an upgrade of transmission facilities and thus, the criteria relating to whether the project can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers is inapplicable. Petition.

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 and upgrade of an 0.5-mile segment of GMP's 3314 transmission line between GMP's Town Line Substation #44 located in Williston, Vermont, and GMP's Digital Substation #43 located in South Burlington, 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 9th day of May, 2003.

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

OFFICE OF THE CLERK

FILED: May 9, 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.