

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 6668

Petition of Green Mountain Power Corporation)
for a Certificate of Public Good for authority to)
upgrade the #2 transformer at the Essex,)
Vermont, Substation #19)

Order entered: 5/23/2002

I. INTRODUCTION

This case involves a petition filed on February 13, 2002 (with supplemental prefiled testimony filed on March 26, 2002) by Green Mountain Power Corporation ("GMP") requesting a certificate of public good ("CPG") under 30 V.S.A. § 248(j). GMP seeks to upgrade its existing Essex Substation #19 by replacing its transformer #2 with a larger unit, rated at 14 mVa, 34.5 kV/12.5 kV. The Essex Substation #19 is located in the Village of Essex Junction, Vermont.

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), pursuant to the requirements of 30 V.S.A. § 248(j)(2).

Notice of the filing in this docket was sent on April 5, 2002, 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 7, 2002.

The ANR filed comments with the Board on May 7, 2002. In its filing, the ANR stated that the proposed project does not appear to raise any concerns for the ANR pursuant to 30 V.S.A. § 248(b)(5).

The DPS filed a Determination under 30 V.S.A. § 202(f) on April 22, 2002.

Notice of the filing, with a request for comments on or before May 7, 2002, was also published in the *Burlington Free Press* on April 9 and 16, 2002.

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. Green Mountain Power Corporation ("GMP") is a Vermont retail electric utility under the jurisdiction of the Board. 30 V.S.A. §§ 201(a) & 203; pet. at 1.

2. GMP owns and operates an electric distribution system in the Town of Essex and Village of Essex Junction, Vermont. Included as a part of the existing system is the Essex Substation #19, located in the Village of Essex Junction, Vermont. Pet. at 1; Arthur pf. at 1-2.

3. The #2 Transformer at GMP's existing Essex Substation #19 is a 7 mVA, 34 kV/4.16 kV transformer. Until recently it supplied the 19J4 distribution circuit. That distribution circuit has been converted to 12.47 kV and temporarily connected to the 33G2 distribution circuit which is supplied from the existing Sand Road Substation. The change to a higher voltage was done for efficiency purposes and to facilitate running an additional 12.47 kV circuit to the Taft Corners area in Williston to alleviate the impacts of present load and upcoming growth. Arthur pf. at 1-2.

4. GMP is proposing to replace the existing #2 Transformer at the Essex Substation #19 with a 14 mVA, 34 kV/12.47 kV transformer. The former 19J4 circuit will then be connected to the proposed new transformer as well as the above described new 12.47 kV distribution circuit feeding part of the existing Taft Corners load plus supplying load up to the Williston side of the Powerhouse Bridge. Arthur pf. at 2.

5. The proposed new transformer and new 12.47 kV distribution circuit will relieve load from the heavily loaded GMP 3314 transmission line and the existing 43G2 distribution circuit. It will also provide additional capacity and voltage support to the growing Taft Corners area. The proposed project (by converting to a higher distribution line voltage) will result in reduced

distribution line losses. It will also provide valuable feeder back up capabilities for the existing 12.47 kV distribution circuits out of the Essex #19 and Sand Road substations. This backup capability will enhance emergency restoration and load shifts for maintenance and construction purposes as well. Arthur pf. at 2.

6. A 14 mVA, 34 kV/12.47 kV transformer is proposed based on sub-transmission capacity issues and load forecasts for the Taft Corners area. It is expected that up to 7 mW will be carried at 12.47 kV from the proposed new #2 Transformer at the Essex #19 Substation shortly after its installation. In addition, 2 mW formerly on the 4.16 kV 19J4 circuit in Essex will be transferred back to the proposed new #2 Transformer. Additional load redistribution from the existing 33G2, 19G6 and 19G7 distribution lines is anticipated to handle spot growth, enhance power quality, and improve feeder backup capabilities. Arthur pf. at 2-3.

7. The cost of the proposed transformer upgrade is approximately \$125,000 and will be accounted for as a capital expenditure. Arthur pf. at 3.

8. GMP evaluated the needed size of the proposed transformer using a transmission and distribution avoided cost tool. That spreadsheet program evaluated various options by taking the present cost and associated losses of each option and calculating a present value of operating the option. As a result, the proposed transformer was selected as the best upgrade option. Arthur pf. at 3-4.

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 3-6 above, and findings 10 through 12, below.

10. By a letter, dated March 21, 2002, GMP contacted the Village of Essex Junction Planning Commission, the Town Planner of the Town of Essex, the Chittenden County Regional Planning Commission, the Village of Essex Junction Trustees, and the Town of Essex Selectboard to provide them with the proposed project plans. In addition, each entity was

contacted either by telephone or in person to further discuss the proposed project. No negative comments or concerns were received. Arthur suppl. pf. at 2.

11. A review of the "Village of Essex Junction Comprehensive Plan Update March 1997" found no conflict with the proposed project. Arthur suppl. pf. at 2.

12. The proposed project will have no impact on any land conservation measures. Arthur suppl. pf. at 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 3-6, above.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

14. The proposed project will have no adverse effect on system stability and reliability; in fact, the system reliability will be improved. This finding is supported by findings 3 through 6, above. Arthur suppl. pf. at 3.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

15. The proposed project will result in an economic benefit to the State. This finding is supported by findings 7 and 8, above.

.Aesthetics, Historic Sites, Air and

Water Purity, the Natural Environment and Public

Health and Safety

[30 V.S.A. § 248(b)(5)]

16. The proposed 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 17 through 36 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).

Outstanding Resource Waters

[10 V.S.A. § 1424a(d)]

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

Water and Air Pollution

[10 V.S.A. § 6086(a)(1)]

18. The proposed project will not produce any emissions or waste and, accordingly, will not result in undue water and air pollution. Arthur pf. at 5. This finding is also supported by findings 19 through 26, below.

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

19. There are no headwaters in the vicinity of the proposed project. Arthur pf. at 5.

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

20. Because the proposed 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. Arthur pf. at 5.

21. An oil containment pit was installed in 1997 for the existing #2 Transformer. This pit is sufficiently large to contain the entire volume of oil of the proposed new transformer (plus approximately 300 cubic feet of excess volume) in the unlikely event of an oil spill or leak. Arthur suppl. pf. at 4.

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

22. The proposed project has no water supply needs. Arthur pf. at 5.

Floodways

[10 V.S.A. § 6086(a)(1)(D)]

23. The proposed project is not located in a floodway. Arthur pf. at 5.

Streams

[10 V.S.A. § 6086(a)(1)(E)]

24. There are no streams which would be impacted by the proposed project. Arthur pf. at 5.

Shorelines

[10 V.S.A. § 6086(a)(1)(F)]

25. The proposed project will not be located near any shorelines. Arthur pf. at 5.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

26. The proposed project will not impact any wetlands. Arthur pf. at 5.

Sufficiency of Water And Burden on

Existing Water Supply

[10 V.S.A. § 6086(a)(2)(3)]

27. The proposed project does not require water to function and so will not place a burden on any existing water supply. Arthur pf. at 5.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

28. The proposed project does not involve disturbance of soils and so will not result in unreasonable soil erosion or reduction in the capacity of the land to hold water. Arthur pf. at 4.

Traffic

[10 V.S.A. § 6086(a)(5)]

29. Because the proposed project involves changes of facilities within the existing Essex #19 Substation, the proposed project 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. Arthur pf. at 1-2.

Educational Services

[10 V.S.A. § 6086(a)(6)]

30. The proposed project is unrelated to and, thus, will not cause any burden on the ability of any municipality to provide educational services. Arthur pf. at 1, 2 and 5.

Municipal Services

[10 V.S.A. § 6086(a)(7)]

31. The proposed project will not require any municipal or governmental services. Arthur pf. at 5.

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

[10 V.S.A. § 6086(a)(8)]

32. Because it will involve only equipment changes at the existing Essex #19 Substation, the proposed project will not have any adverse effect (much less an undue adverse effect) on the scenic or natural beauty of the area, aesthetics, historic sites, or rare and irreplaceable natural areas. Arthur pf. at 4.

**Necessary Wildlife Habitat and
Endangered Species**

[10 V.S.A. § 6086(a)(8)(A)]

33. The proposed project will have no impact on any known natural areas, necessary wildlife habitat or endangered species. Arthur pf. at 5.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

34. The proposed relocation project will not 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. Arthur pf. at 1-5.

Compliance with Executive Order #52 – Agricultural Land

35. Due to its location in an existing substation, the proposed project will have no effect on any prime agricultural soils. Arthur pf. at 5.

Public Health and Safety

[30 V.S.A. § 248(b)(5)]

36. The proposed project will be constructed consistent with sound engineering and construction practices, in accordance with all applicable safety and health standards. Arthur pf.

at 1-5. The proposed project shall be constructed in accordance with the National Electrical Safety Code. Public Service Board Rule 3.500.

Consistency with Resource Selection

Integrated Resource Selection

[30 V.S.A. Sec. 248(b)(6)]

37. The proposed project is consistent with the principles for resource selection expressed in GMP's approved least-cost Integrated Resource Plan. This finding is supported by findings 2-8, above and finding 38, below.

38. Various least-cost planning and evaluation techniques were utilized to determine the proper transformer to be obtained for the proposed project. The proposed transformer resulted from that process. Hipp pf. at 2-4.

Compliance With Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

39. The project as proposed is consistent with the Vermont 20-Year Electric Plan. The DPS has determined, in a letter dated April 22, 2002, that the proposed project is consistent with the Vermont 20-Year Electric Plan in accordance with 30 V.S.A. § 202(f), provided that GMP upgrades this transformer in a manner consistent with the petition and testimony. DPS Section 202(f) Determination.

Outstanding Water Resources

[30 V.S.A. § 248(b)(8)]

40. No waters of the state that have been designated as Outstanding Resource Waters will be affected by the proposed project. See finding 17, above. Arthur pf. at 5.

Existing Transmission Facilities

[30 V.S.A. § 248(b)(10)]

41. The proposed project will have no adverse affect on Vermont customers or utilities and, in fact, will improve reliability of existing service to GMP customers as a result of the proposed increase in transformer capacity and conversion to a higher distribution voltage. Arthur pf. at 1-2.

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 upgrade of the #2 transformer at the Essex Substation #19, in the Village of Essex Junction, Vermont, in accordance with the evidence and plans presented in this proceeding, will promote the general good of the State of Vermont, pursuant to 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 23rd day of May, 2002.

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

OFFICE OF THE CLERK

FILED: May 23, 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 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.