

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7448

Petition of New England Power Company, d/b/a)
National Grid, for a Certificate of Public Good,)
pursuant to 30 V.S.A. § 248(j), authorizing)
construction associated with the revitalization of)
its 115 kV and 46/69 kV substations in the)
Town of Rockingham, Vermont, located)
adjacent to the hydroelectric generating station)
owned by TransCanada Hydro Northeast, Inc.)

Order entered: 9/19/2008

I. INTRODUCTION

This case involves a petition filed by New England Power Company, d/b/a National Grid ("NEP") on April 25, 2008, requesting a certificate of public good under 30 V.S.A. § 248(j) to authorize construction associated with the revitalization of its 115 kV and 46/69 kV substations in the Town of Rockingham, Vermont. NEP submitted prefiled testimony, proposed findings, and a proposed order pursuant to the requirements of 30 V.S.A. § 248(j).

On June 17, 2008, the Public Service Board ("Board") issued a memorandum requesting additional information prior to processing NEP's petition. NEP filed the required information on July 10, 2008.

Notice of the filing was sent on July 20, 2008, to all entities specified in 30 V.S.A. § 248(a)(4)(c) and all other interested parties. 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 needed to file comments with the Board on or before August 20, 2008. A similar notice of the filing was published in the *Brattleboro Reformer* on July 23 and July 30, 2008.

On August 20, 2008, and August 21, 2008, the Agency of Natural Resources ("ANR") and the Department of Public Service ("DPS"), respectively, filed letters stating that the petition

does not raise a significant issue with respect to the criteria of Section 248 and a certificate of public good should be issued.

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. PROCEDURAL MATTERS

On August 20, 2008, Island Corporation, an adjoining landowner, filed a motion to intervene. No party filed comments on Island Corporation's motion. Island Corporation is granted permissive intervention pursuant to Board Rule 2.209(B).

On August 14, 2008, ANR filed an entry of appearance for Aaron Adler, Esq., and a motion to appear *pro hac vice* of Michael Steeves, Esq. ANR's motion is granted.

III. FINDINGS

1. NEP is a subsidiary of National Grid USA, Inc., a Delaware Corporation, which is a subsidiary of National Grid plc. NEP is a Massachusetts corporation engaging primarily in the business of wholesale transmission of electricity and is qualified to transact business in Vermont as a foreign corporation. The petitioner is a company as defined by 30 V.S.A. § 201 and as such is subject to the Board's jurisdiction. Petition at 1.

2. The Project involves modifications to two existing NEP substations and an existing generator step-up transformer ("GSU") area in the existing fence line on the Project site. The 115 KV and 46/69 kV substations and GSU area are adjacent to each other in an industrial site surrounded by buildings, except for the Connecticut River located directly to the south. Damiano pf. at 20; exh. CEW-2.

3. NEP's Bellows Falls substations are connected to a three-turbine, 49 MW hydroelectric generating station owned by TransCanada Hydro Northeast Inc. ("TransCanada") located along the Connecticut River in the Town of Rockingham, Vermont. The existing hydroelectric generating station and associated 115 kV and 46/69 kV yards date to the 1920's. NEP formerly

owned the Bellows Falls 115 kV and 46/69 kV substations as well as the hydroelectric generating station. TransCanada is now the owner of the hydroelectric generating station; NEP has retained an easement on which the 115 kV and 46/69 kV substations are located. Wilson pf. at 4; exhs. CEW-2, CDW-5, and SPD-3.

4. Three, three-winding GSUs step up the 6.6 kV generator output to supply switchyards at the site which are operating at 46 kV, 69 kV, and 115 kV. NEP owns the GSUs as well as the 46/69 kV and 115 kV substations. Vermont Electric Power Company, Inc. ("VELCO") owns the existing 115/46 kV transformer (No. 2A), located in the 115 kV substation. The 46 kV lines feed local distribution and the 69 kV and 115 kV lines interconnect with NEP's and VELCO's transmission systems. Wilson pf. at 4-5; exh. CEW-2.

5. Both the 115 kV and the 46/69 kV substations are surrounded by chain link fencing with locked gates and the overall site is surrounded by chain link fencing with locked gates, thus creating a fence-within-a-fence arrangement. The substations are unmanned; workers visit the Project site periodically to perform switching operations and maintenance activities. Richards pf. at 3.

6. Environmental and reliability concerns, as well as maintenance of the aged facility, are the main factors that have driven the Project. The replacement of aging equipment and other improvements are needed to improve switchyard reliability, enhance operations, and reduce maintenance requirements so that NEP can continue to provide reliable electric service and support southern Vermont's energy use within the New England transmission system. Wilson pf. at 5.

7. NEP's system planners have reported that its system control has observed 115 kV bus voltage less than 109 kV (0.95 p.u.) during summer operations and this item has been placed on the NEP Operating Limitations Action List. A capacitor bank will be installed on the 115 kV bus as part of the Project to improve system voltage. There also is a need to segregate the substation

assets to streamline contemporary and future power operations since, in the future, TransCanada will ultimately own the GSUs.¹ Wilson pf. at 5-6.

8. A recent environmental audit identified several areas at the substations needing attention, including evidence of transformer fluid leakage into the existing oil-containment system of the GSUs. Wilson pf. at 5.

9. The Project involves work inside the existing NEP substations and the existing GSU area on the Project site. The following is a list of main Project upgrades and construction:

- Remove the three existing GSUs and the associated lattice structure above the GSUs;
- Remove the overhead tap lines from the existing GSUs to the 46/69 kV and 115 kV substations;
- Replace and modify the overhead tap lines between the 46/69 kV and 115 kV substations;
- Remove the retired oil pump house and equipment at the 115 kV substation;
- Remove the existing #3 69-46 kV, 8 MVA transformer;
- Replace the oil circuit breakers with gas circuit breakers;
- Change the one-line to better implement new line-of-ownership demarcation;
- Install a new 115-46 kV, 30/40/50 MVA autotransformer to replace the 46 kV terminal supply from the existing GSU #2;²
- Install a new 115-69 kV, 33.6/44.8/56 MVA autotransformer to replace the 69 kV terminal supply from the existing GSU #3;³
- Install one new 30 MVar, 115 kV capacitor;
- Install one new 115 kV gas circuit breaker for the new capacitor and one new gas circuit breaker as a 115 kV bus-tie breaker;
- Replace the existing disconnect switches and strain bus;
- Construct a new 115 kV yard control house (22 x 40 foot) and associated station service, relay, control, supervisory control and data acquisition ("SCADA"), fiber optic, telemetering, and metering equipment within the existing 115 kV switchyard;
- Construct a new 46/69 kV yard control house (22 x 30 foot) and associated station service, relay, control, SCADA, fiber optic, telemetering, and metering equipment within the existing 46/69 kV switchyard;

1. On May 9, 2008, the Board issued a final order for TransCanada's petition under Section 248 in Docket 7353 for the relocation and replacement of transformers and the relocation of the bus and switchgear at the Bellows Falls Hydroelectric Station. The Board approved the construction, by TransCanada, of two generator step up transformer to replace the three GSUs owned by NEP.

2. The 46 kV switchyard is presently supplied from the VELCO 115-46 kV transformer with an alternate supply from the 46 kV terminals of GSU #2. A second supply will be maintained after the GSU transformers are removed by installing a new 115-46 kV transformer. In order to operate the two transformers in parallel, the new transformer configuration and ratings will match the existing VELCO transformer.

3. The 69 kV line G-33 is presently supplied from the 69 kV terminals of GSU #3. A NEP standard 115-69 kV transformer will be installed to supply this line after the GSU transformers are removed.

- Remove the existing station service, relay, control, SCADA, telemetering and metering equipment from within the existing TransCanada powerhouse building;
- Replace the existing fence and associated gates;
- Install new instrument transformers and wave traps;
- Review existing grounding and upgrade as required;
- Install enhanced lightning protection;
- Grade and gravel a portion of the existing access road to the east of the 46/69 kV substation;
- Replace four existing wood transmission pole structures located to the east of the 46/69 kV substation with slightly taller structures;
- Install a duct bank/cable-tray system along the existing fish ladder between the 115 kV and 46/69 kV substations; and
- Remove the existing microwave tower and dish located on the Bellows Falls Hydroelectric Station.

Wilson pf. at 6-8.; Olausen pf. at 4; exh. CEW-2.

10. As part of the revitalization project, NEP will conduct environmental remediation under the oversight of the Vermont Department of Environmental Conservation ("VTDEC"). NEP has prepared a Subsurface Investigation Report and a Site Investigation Report that have been filed and reviewed by the VTDEC. NEP has also prepared a draft Corrective Action Plan ("CAP") to address the existing environmental conditions at the Project site which has been submitted to the VTDEC for its review and approval. The CAP activities were summarized in the final Site Investigation Report and the VTDEC responded by letter to the report indicating that the proposed CAP recommendations presented in the report are consistent with the applicable VTDEC guidance. Wilson pf. at 8-9; Richards pf. at 10.

11. The draft CAP provides a work plan for managing excavated soils; assessing, removing, and properly disposing of the concrete pads, pump house and metering shed that will be decommissioned and removed from the Project site; and quarterly groundwater monitoring at the Project site. The CAP identifies the soil management protocols and assessment, and the removal and disposal protocols NEP will follow for the structures that will be removed and/or replaced as part of the Project. Wilson pf. at 9.

12. The soil remediation deemed necessary by VTDEC will be conducted as part of the construction activities associated with the substation revitalization Project. Impacted soils proposed to be disturbed during construction will be removed for proper off-site management (treatment, recycling, and disposal). Richards pf. at 7-8.

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

13. The proposed project would 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 and 15, below.

14. NEP submitted notice of the Project to the Rockingham Selectboard, Bellows Falls Village Trustees, Town of Rockingham Officials, Rockingham Planning Commission, and the Windham Regional Planning Commission pursuant to Section 248(f). Neither the towns or commissions submitted any objections. The Rockingham Town Manager submitted a letter stating that the Project will not have an adverse effect on the orderly development of the region or public health and safety, and will not place an unacceptable burden on the ability of the Town of Rockingham or Village of Bellows Falls to provide municipal or governmental services. Wilson pf. at 10-11, 15, 23; exh. CEW-9.

15. The Project is not a new energy transmission corridor or generating facility, and will be re-built within the footprint of the existing substations and right-of-way/easements. The Project complies with the provisions for energy, land conservation, and scenic resources of the Rockingham Town Plan. The Project complies with the energy policies and land use section of the Windham Regional Plan. Wilson pf. at 11-20; exhs. CEW-10 and CEW-13.

Need for Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

16. The proposed project 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. This finding is supported by findings 17 and 18, below.

17. The Project is proposed to retire and replace aged equipment, address environmental issues, and generally update and enhance operations, reliability, and reduce maintenance requirements of existing, aged facilities. These existing, aged facilities are an integral part of the New England transmission system, which provides electric service and support to southern Vermont as well as the neighboring southwest New Hampshire electrical systems. Wilson pf. at 20.

18. The Project is not driven by new electrical demand, but rather is needed principally as a maintenance activity to replace existing and aged facilities. Therefore, the need for the Project could not otherwise be addressed through energy conservation or load measures. Wilson pf. at 20-21.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

19. The proposed project would not adversely affect system stability and reliability. This finding is supported by findings 20 through 22, below.

20. The Project will increase system stability and reliability by upgrading the substations with more efficient and reliable equipment. Wilson pf. at 21.

21. Consistent with ISO-New England Inc. ("ISO-NE") requirements, NEP has performed a Thermal and Voltage System Impact Study and a Transient Stability System Impact Study for the Project. The studies found that there is no significant adverse impact introduced by the Project to the reliability or operating characteristics of NEP's transmission facilities, the transmission facilities of another Transmission Owner, or the system of a Market Participant. Wilson pf. at 21; exhs. CEW-3 and CEW-4.

22. ISO-NE confirmed NEP's conclusion that the proposed project would not have an adverse impact on the transmission system. Wilson pf. at 21; exh. CEW-14.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

23. The proposed project would provide an economic benefit to the State. This finding is supported by findings 24 through 25, below.

24. The improved system reliability benefit associated with the replacement and upgrading of aged equipment will benefit the southern Vermont and New Hampshire electrical networks. Wilson pf. at 22.

25. The Project will help to mitigate the unacceptable risks of transmission and subtransmission failures in southeastern Vermont. While NEP does not have a detailed, quantified estimate of the economic costs of inaction, these costs could be significant. Wilson pf. at 22.

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

[30 V.S.A. § 248(b)(5)]

26. The modifications as proposed will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and public health and safety. This finding is supported by findings 27 through 73; below, which are the criteria specified in 10 V.S.A. §§ 1424(a)(d) and 6086(a)(1)-(8)(a) and (9)(k).

Public Safety

[30 V.S.A. § 248(b)(5)]

27. The Rockingham Town Manager has reviewed the public health and safety aspects of the Project with the Bellows Falls Police Department and the Chief of the Bellows Falls Fire Department. The Rockingham Town Manager submitted a letter stating that the Project will not have an adverse effect on public health and safety. Wilson pf. at 25; exh. CEW-9.

Outstanding Resource Waters

[10 V.S.A. § 1424(a)(d)]

28. The Project will not be located on or anywhere near any segment of any outstanding resource waters of the State as identified by the Water Resources Board. The Project is located on the Connecticut River, which has not been designated an outstanding resource water. Damiano pf. at 9, 25.

Water Pollution

[10 V.S.A. § 6086(a)(1)]

29. The proposed project would not result in undue water pollution. This finding is supported by findings 30 through 34, below.

30. A new oil containment system is proposed for each transformer. The substations are designed with an oil spill containment system that will contain any drips or inadvertent spills from transformers, and prevent discharge to ground or surface water in compliance with the federal Spill Prevention, Control and Countermeasure ("SPCC") regulations. Richards amended pf. at 18; rev. exh. SPD-6.

31. The proposed oil containment is constructed by excavating a sump pit or basin with a liner system that encompasses the foundations for the transformers. The dimensions of the sump are based on the volume of oil in the transformer, and the depth to the groundwater. The sump is lined with a 12-inch layer of well-compacted "specified silt," compacted in two 6-inch layers, sandwiched between top and bottom layers of 16-ounce polypropylene geotextile. This "specified silt" material was selected to contain a release in accordance with the SPCC regulations. Under conditions expected during a potential release of mineral oil dielectric fluids from a transformer, the sump is sufficiently impervious to prevent discharge of oil to ground water or surface water in quantities that may be harmful. Richards amended pf. at 18-19; rev. exh. SPD-6.

32. With the exception of a fire hydrant for fire suppression, there is currently no water use associated with the Project during construction or operation. Therefore, no water or water discharges or potential water pollution is associated with the Project. Damiano pf. at 9.

33. The stormwater discharge resulting from the construction of the Project and the operation of the Project post-construction do not result in the need for stormwater management and operating permits by the State Water Quality Division. Damiano pf. at 10.

34. The project includes the decommissioning and removal of three water-cooled GSUs containing a significant amount of oil. NEP's CAP identifies the removal and disposal protocols NEP will follow for the GSUs and other structures that will be removed and/or replaced as part of the Project. Although groundwater is not anticipated to be encountered during construction, the protocols include provisions for the management of impacted and clean groundwater. Richards amended pf. at 9.

Air Pollution

[10 V.S.A. § 6086(a)(1)]

35. The Project will not result in undue or unreasonable air pollution. This finding is supported by findings 36 through 40, below.

36. There are no significant sources of air emissions from NEP's substations at the Bellows Falls site. There are no significant risks of air pollution associated with the operation of the replacement transformers, the switchgear or the bus; and there are no other sources of air emissions relating to the Project, other than construction-related sources. Damiano pf. at 7.

37. During construction, dust will be monitored and controlled if necessary using a water spray to dampen solids, gravel cover on equipment travel way, and mulch in appropriate areas. Damiano pf. at 8; exh. SPD-3.

38. Sulfur hexafluoride ("SF6") is a gas used as an insulator in the switchgear in the substation. The switches are installed and maintained by a trained technical staff and they are checked for integrity during regular inspections. If an SF6 leak is detected, alarms (audible and visual strobe light) are initiated locally at the control house and a remote alarm is sent to National Grid's control center located in Westborough, Massachusetts, to initiate proper response actions. Richards amended pf. at 15-16.

39. The battery acid associated with the control house batteries is well-contained inside solid battery packs and housed inside the control building with a shallow berm surrounding the

battery pack area with acid-absorbent pillows lining the bermed area. Any leaks from the batteries will be contained within the bermed area and hydrogen gas vapors from a leaky battery will be detected by sensors. If hydrogen gases reached two percent, alarms (audible and visual strobe light) are initiated locally at the control house and a remote alarm is sent to National Grid's control center to initiate proper response actions. At the same time, fans are automatically activated to purge gas from the control house. Richards amended pf. at 16.

40. The transformers to be installed as part of the Project will meet the standards published by the National Electrical Manufacturer's Association ("NEMA") for noise emissions from new power transformers. The standards give maximum noise levels at a distance of 1 to 6 feet from a transformer under various cooling modes, by transformer sizes. The noise generated by the Project will not be out of character with the existing uses in the vicinity of the Project. Damiano pf. at 23.

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

41. The proposed project is not located within a headwaters region of applicable watersheds. Although the Project is located in a drainage area, the Connecticut River, it is greater than 20 square miles, is not above 1,500 feet in elevation, is not located within a watershed of a public water supply, and does not provide significant recharge to aquifers. Damiano pf. at 11.

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

42. The proposed project would not involve the injection of waste materials or any harmful toxic substances into ground water or wells. Richards amended pf. at 22-23.

43. Excavated soils for foundations will be monitored for potential contamination, and managed appropriately under NEP soil management and VTDEC procedures as well as applicable waste recycling and re-use policies. The Project will adhere to applicable regulations regarding the disposal of contaminated soils adopted by the VTDEC and the Vermont

Department of Health, including special wastes generated during infrastructure removal, such as asbestos, contaminated concrete, and lead paint. Richards amended pf. at 23.

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

44. The Project will have no water supply or wastewater connections and, therefore, no additional water will be used as the result of the Project. Damaino pf. at 11.

Floodways

[10 V.S.A. §§ 6086(a)(1)(D)]

45. The Project site is not located within the 100-year floodway of the Connecticut River. Even in a greater-than-100-year-flood event, the proposed new foundations, equipment and structures would not have a measurable effect on flood-flow obstruction or flood-storage capacity above the 100-year event, and would not measurably or adversely affect the level of flooding or be a public flood hazard. Damiano pf. at 12-14; exh. SPD-5.

Streams

[10 V.S.A. §§ 6086(a)(1)(E)]

46. There are no streams on or near the Project site; the only waterway near the Project area is the Connecticut River. Damiano pf. at 8, 14; exh. SPD-4.

Shorelines

[10 V.S.A. §§ 6086(a)(1)(F)]

47. The proposed project will, insofar as possible, retain all shorelines and waters in their natural condition, allow continued access to the waters and the recreational opportunities provided by the waters, retain or provide vegetation which will screen the proposed project from the waters, and stabilize the bank from erosion, as necessary, with vegetation cover. This finding is supported by findings 48 through 51, below.

48. The shoreline and the waters will retain their natural condition. The Project site is located approximately 20 feet above the mean high water level of the Connecticut River. The proposed project is located in an existing industrial area and will not result in any expansion to the existing fence-line south of the 46/69 kV substation within the adjacent shoreline to the Connecticut River. Damiano pf. at 8, 15; exh. SPD-4.

49. The Project will not alter the existing access to the waters and recreational opportunities provided by the water. The river shoreline south of the 46/69 kV substation is exposed ledge with steep bluffs that currently provide no access to the river. Damiano pf. at 15.

50. The proposed project will not necessitate the removal of vegetation that currently provides screening for the existing substations. Damiano pf. at 15.

51. The shoreline bluff areas south of the Project area are characterized by vegetated stable bank or rock that is not subject to frequent erosion forces typical of a large river bend. The Project construction will not disturb any vegetative cover, change the drainage, or disturb soil that could result in bank erosion of the shoreline area. Damiano pf. at 15.

Discussion

_____ Subsection 6086(a)(1)(F) provides that a permit may be granted if the applicant demonstrates that "the development or subdivision of shorelines must of necessity 'be located on a shoreline in order to fulfill the purpose of the development or subdivision, . . . "'

No party has questioned whether the proposed project "must of necessity be located on a shoreline in order to fulfill the purpose" of the proposed project. The proposed project involves construction at existing substations and an existing GSU area; rebuilding the substations at a site distant from shorelines could have significant economic and environmental impacts. Accordingly, the necessity standard has been met in this case.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

52. The Project will not create an undue, adverse impact upon wetlands. There are no Class I, Class II or Class III wetlands in proximity to the proposed location of the Project. Damiano pf. at 16.

Sufficiency of Water and Burden on Existing Water Supply

[10 V.S.A. §§ 6086(a)(2)&(3)]

53. The Project will not place a burden on the existing water supply. The Project will not have any water-supply or wastewater connections. Damiano pf. at 17.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

54. The Project will not result in unreasonable soil erosion or a reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result. The Project site has been graded and paved and most of the underlying soil is urban fill consisting of native soil mixed with furnace material to nine or ten feet below grade. The existing grade within the Project site is essentially level and primarily covered with gravel, and the soil erosion hazard potential is considered very low. The Project's Erosion Prevention and Sediment Control Plan is effectively designed to minimize the risks of erosion during construction. Damiano pf. at 18-19; exh. SPD-3.

Transportation Systems

[10 V.S.A. § 6086(a)(5)]

55. The proposed project would not cause unreasonable congestion or unsafe conditions with respect to transportation systems. This finding is supported by findings 56 through 57, below.

56. Equipment and materials for the Project will be transported to the site by conventional truck transport. Although there will be a temporary increase in construction vehicles during construction through the Village of Bellows Falls, the construction truck traffic will be dispersed over an approximately sixteen-month construction duration, and will not cause unusual congestion or unsafe transportation conditions. Wilson pf. at 22-23.

57. NEP will notify local emergency services when large deliveries are to be made; deliveries will be scheduled to avoid peak vehicle-traffic periods in the downtown area as well as

train traffic at the Mill Street crossing. A traffic plan will be developed and reviewed with the Town of Rockingham and Village of Bellows Falls and their input will be secured. Wilson pf. at 23.

Educational Services

[10 V.S.A. §§ 6086(a)(6)]

58. The Project will not cause an unreasonable burden on the ability of a municipality to provide educational services. No additional permanent jobs will be created by the Project, and there will be no additional impact of school children on the local school systems. Wilson pf. at 23.

Municipal Services

[10 V.S.A. § 6086(a)(7)]

59. The Project will not cause an unreasonable burden on the ability of the local governments to provide municipal or governmental services. The Project has been reviewed with the Rockingham Selectboard, Bellows Falls Village Trustees and Town of Rockingham Officials, including the then-Town Manager, Public Works Director and Director of Economic Development. The Rockingham Town Manager submitted a letter stating that the Project will not place an unacceptable burden on the ability of the Town of Rockingham or Village of Bellows Falls to provide municipal or governmental service. Wilson pf. at 11, 23; exh. CEW-9.

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

[10 V.S.A. § 6086(a)(8)]

60. The proposed project would not have an undue adverse impact on the scenic or natural beauty, aesthetics, historic sites, or rare and irreplaceable natural areas. This finding is supported by findings 61 through 71, below.

61. The Project involves work inside the existing NEP substations and the existing GSU area on the Project site. Except for the Connecticut River located directly to the south, the Project area is surrounded by buildings. Damiano pf. at 20; exhs. CEW-2 and SPD-2.

62. The additional lighting to be installed in conjunction with the Project will be limited to the extent necessary to support operations and provide security at the substations and accessory equipment. Under normal conditions, only limited night-time lighting would be on at the substation, at the entrances and control buildings, and along the substation fence. Damiano pf. at 20-21.

63. The Project is essentially a replacement project and is located near an existing hydroelectric facility in an industrial area. The noise generated by the on-going operation of the substations will not be out of character with existing uses in the immediate vicinity of the Project. Transformers to be installed as part of the Project will meet current NEMA noise emission standards. Damiano pf. at 23.

64. The Project complies with written standards of the Windham Regional Plan and the Town of Rockingham Plan applicable to scenic resources. The Project will be in character with its surroundings, especially adjacent existing abandoned and occupied manufacturing buildings, so as to not offend the sensibilities of the average person. Damiano pf. at 22-23.

65. NEP has taken available mitigating steps to improve the compatibility of the proposed Project with the surrounding land use and visual context, including locating the Project within the existing fence lines of the substations to the extent possible, limiting lighting, and meeting noise emission standards. Damiano pf. at 24.

66. The Project is wholly located in an area that has been previously and extensively developed for industrial uses. Vermont Fish and Wildlife Department Nongame and Natural Heritage Program has reviewed the Project and concluded that there are no known occurrences of significant natural communities in the Project area. Damiano pf. at 24; exh. SPD-8.

67. There are several historic properties located at or near the Project site that have the potential to be affected by the Project. The Bellows Falls Hydroelectric Development is eligible for listing in the National and State Registers of Historic Places and the Bellows Falls Downtown

Historic District and the Moore & Thompson Paper Company Complex are listed in the National Register of Historic Places. Olausen pf. at 4-5, 7-8; exhs. SAO-1, Photos 1-2 and SAO-2.

68. The Project will not have any undue adverse effects on historical architectural properties. The Project will have no effect on either the Bellows Fall Downtown Historic District or the Moore & Thompson Paper Company Complex because the proposed changes would not significantly alter the aesthetic qualities of those properties. Olausen pf. at 11-12.

69. The Project will have an adverse effect on the Bellows Falls Hydroelectric Development, but the effect would not be undue because it will affect only ancillary components of the development, and would not seriously diminish the overall qualities of significance that make the development eligible for listing in the National Register. The general appearance of the substations will remain largely intact through the retention of the historic lattice tower structures. Olausen pf. at 12-13.

70. NEP has reviewed the effects of the Project on historical sites with the State of Vermont Division for Historic Preservation ("DHP"). DHP has concurred with NEP's assessment that the Project will have an adverse effect on the Bellows Falls Hydroelectric Development, but the effect would not be undue. NEP and DHP have entered into a memorandum of agreement that calls for NEP to undertake specified written and photographic documentation activities before beginning the construction of the Project. Olausen pf. at 13-14; exhs. SAO-5 and SAO-6.

71. The Project will not result in adverse effects on archeological properties in the Project area. DHP has concurred with NEP's conclusion that no further archeological investigations are recommended for the Project area. There are no recorded archaeological sites within the Project area. Cherau pf. at 3, 5-7; exhs. SGC-1 and SAO-5.

Necessary Wildlife Habitat and Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

72. There are no known occurrences of necessary wildlife habitats, rare, threatened or endangered species or significant natural communities in the Project area. The Project is wholly located in an area that has been previously and extensively developed. The existing fish ladder installed in the tail water of the hydroelectric station will not be affected by the Project. The

project is not likely to adversely affect the dwarf wedgemussel (*Alasmidonta heterodon*) or its habitat; and no other federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the State of Vermont and the U.S. Fish and Wildlife Service are known to occur in the Project area. Damiano pf. at 25-27; exhs. SPD-4 and SPD-8.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

73. The proposed project would 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 adversely impact the public's use or enjoyment or access to the Connecticut River as public land. The project will not adversely impact the public's use or enjoyment or access to other public facilities located near the Project, including the New England Central Railway, the TransCanada hydroelectric station and the electric-transmission system. Damiano pf. at 27; Wilson pf. at 24-25.

Least-Cost Integrated Resource Plan

[30 V.S.A. § 248(b)(6)]

74. As a non-distribution utility with no retail customers in Vermont, NEP is not required to have an integrated resource plan. Wilson. pf. at 25.

Compliance with Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

75. The proposed project is consistent with the Vermont Electric Plan (the "Plan"). While the Plan does not specifically mention the Project, the Plan describes the three distinct power grids or "interconnections," including the Eastern Interconnection. The Plan also highlights the need for a reliable delivery system within these interconnections and the importance of the transmission system of which the Project is part of the power delivery network in Vermont. The

improvements contemplated by the Project are needed to improve switchyard reliability, enhance operations, and reduce maintenance requirements so that NEP can continue to provide reliable electric service and support for Southern Vermont's energy use within the New England transmission system. Wilson pf. at 26.

76. The Department filed a determination on August 28, 2008, that the proposed project is consistent with the Vermont Electric Plan, in accordance with 30 V.S.A. § 202(f).

Outstanding Resource Waters

[30 V.S.A. § 248(b)(8)]

77. The Project will not be located on or anywhere near any segment of any outstanding resource waters. The Project is located on the Connecticut River, which has not been designated an outstanding resource water. Damiano pf. at 9, 28.

Existing or Planned Transmission Facilities

[30 V.S.A. § 248(b)(10)]

78. The revitalized substations will serve the transmission facilities that already exist in the area with enhanced benefits for, and without an undue adverse impact on, Vermont utilities or customers. Wilson pf. at 27.

IV. CONCLUSION

Based upon all of the above evidence, we conclude that the upgrades at NEP's 115 kV and 46/69 kV substations and GSU area 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 by 30 V.S.A. § 248(j); and the proposed 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:

1. The proposed Project of New England Power Company, d/b/a National Grid ("NEP"), on the site of NEP's existing substation in the Town of Rockingham, Vermont will promote the general good of the State of Vermont in accordance with 30 V.S.A. Section 248, and a certificate of public good to that effect shall be issued.
2. Upgrades to the Project site shall be in accordance with the plans as submitted in these proceedings. Any material deviation from these plans must be approved by the Board.
3. The Project will adhere to applicable regulations regarding the disposal of contaminated soils adopted by the Vermont Department of Environmental Conservation and the Vermont Department of Health, including special wastes generated during infrastructure removal, such as asbestos, contaminated concrete, and lead paint.
4. NEP will adhere to the memorandum of agreement between the State of Vermont Division for Historic Preservation and NEP that calls for NEP to undertake specified written and photographic documentation activities before beginning the construction of the Project.
5. All construction activities will be in compliance with the Agency of Natural Resource's Low Risk Site Handbook for Soil Erosion Prevention and Sediment Control.

Dated at Montpelier, Vermont this 19th day of September, 2008.

s/James Volz _____)

) PUBLIC SERVICE

s/David C. Coen _____)

) BOARD

s/John D. Burke _____)

) OF VERMONT

OFFICE OF THE CLERK

FILED: September 19, 2008

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.