

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 6923

Petition of Entergy Nuclear Vermont Yankee, LLC)
and Entergy Nuclear Operations, Inc., pursuant to)
30 V.S.A. § 248(j), for a certificate of public good)
authorizing modification of certain transmission)
facilities located at the Vermont Yankee Nuclear)
Power Station in Vernon, Vermont, to enable the)
proposed uprate of the Station)

Order entered: 3/19/2004

I. INTRODUCTION

This Docket concerns a petition filed by Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. ("Entergy" or the "Company") requesting Vermont Public Service Board ("Board") issuance, pursuant to 30 V.S.A. § 248(j) of a Certificate of Public Good ("CPG"), authorizing Entergy to make certain modifications to its transmission facilities at the Vermont Yankee Nuclear Power Station ("Vermont Yankee") in Vernon, Vermont, to accommodate the power uprate that was recently approved in Docket 6812.¹ The specified physical facilities are within the property and boundary fences of the facility. No radioactive or hazardous waste will be generated by the proposed modifications.

Notice of the filing in this Docket was sent on February 10, 2004, to all parties 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 their comments with the Board on or before March 12, 2004. Notice of the filing, with a request for comments on or before March 12,

1. See Order of 3/15/04.

2004, was published in the *Brattleboro Reformer* on February 13, and February 20, 2004. The notice requested comment within 21 days of the last publication on the question of whether the petition raises a significant issue with respect to the substantive criteria of 30 V.S.A. § 248.

On March 12 comments were received from the Vermont Department of Public Service ("Department") stating that the requested CPG should be granted with the following conditions:

- Entergy shall consider replacement of the 345 kV Vermont Yankee 381 breaker to be a high risk event - loss of offsite power (HRE-LOOP) in accordance with its procedure AP 0172, Work Schedule Risk Management - On Line.
- Circuit modifications performed by Entergy that are required to increase the pre-contingency MVA rating of the Vermont Yankee - Northfield (Massachusetts) 345 kV line shall take place during the Vermont Yankee spring 2004 refueling outage.
- Prior to Entergy performing the following: (A) circuit modifications at Vermont Yankee required to increase the pre-contingency MVA rating of the Vermont Yankee - Northfield (Massachusetts) 345 kV line; (B) provision of a second primary protection scheme on the Vermont Yankee 345 kV North Bus; and (C) upgrading of the 345 kV Vermont Yankee 381 breaker; Entergy shall receive written notification from the Vermont Electric Power Company, Inc. ("VELCO") that Entergy's plans with respect to these upgrades are acceptable to VELCO.

No other comments were received.

On March 18, 2004, Entergy filed a letter with the Board stating that it does not object to the conditions proposed by the Department. On March 19, 2004, VELCO filed a letter stating that it had reviewed Entergy's proposed changes.

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

1. Entergy is a company, as defined in 30 V.S.A. § 201. Petition at 1.
2. Entergy owns and operates certain electrical equipment and transmission facilities at Vermont Yankee. In order to implement a 20% increase in power output (the power uprate) at Vermont Yankee, which the Board approved in Docket 6812, ISO-New England ("ISO-NE") required Entergy to perform certain modifications. Thomas pf. at 2.
3. These conditions (collectively referred to as "modifications" or the "project"), required by ISO-NE, are described below in findings 4-8.
4. ISO-NE requires that Entergy increase the pre-contingency MVA rating on the Vermont Yankee–Northfield (Massachusetts) 345 kV line from the current rating of 896 MVA to a minimum rating of 1075 MVA. The existing electrical circuits that monitor and limit power flow over the transmission line, and provide protection against faults and overloads, will be upgraded, adjusted or replaced, as required, to achieve the new setting. Thomas pf. at 4-5.
5. A second primary protection scheme on the Vermont Yankee 345 kV North Bus must be provided to achieve acceptable performance in response to a normal contingency fault. The existing North Bus protection scheme is provided by a current differential circuit that monitors current flow through the bus. A new second system will provide a duplicate and redundant protection scheme for the bus. The physical modifications will include installation of a cable from the spare current transformers on 345 kV breakers 381 and 379 to the relay house. The balance of work consists of wiring changes at the Vermont Yankee switchyard equipment and in the relay house. No new equipment is required. Thomas pf. at 5.
6. A second primary protection scheme on the Vermont Yankee Generator Step Up Transformer must be added to achieve acceptable performance in response to a normal contingency fault. The physical modifications involve the installation and wiring of a new multi-function protective relay in the Vermont Yankee Control Room that provides independent transformer differential current protection as one of its functions. Thomas pf. at 5.
7. The 345 kV Vermont Yankee 381 breaker must be upgraded to an Independent Pole Tripping ("IPT") breaker. The existing breaker will be replaced with a new breaker that has the IPT feature. Thomas pf. at 5.

8. Out-of-step protective relaying on the Vermont Yankee generator must be added to ensure acceptable performance in response to several extreme contingencies. The physical modifications require the installation and wiring of a new multi-function protective relay in the Vermont Yankee Control Room that provides generator out-of-step protection as one of its functions. Thomas pf. at 5-6.

9. VELCO has reviewed these modifications in accordance with the Interconnection Agreement dated June 27, 2002. Letter of March 19, 2004, from Gary L. Franklin, Esq., to Susan M. Hudson, Clerk of the Board, with attachment from VELCO.

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

10. The proposed electrical equipment and transmission system improvements are minor and are not likely to have any impact on the orderly development of the region. Thomas pf. at 6.

Need for Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

11. The Board has determined that the uprate is needed to meet the 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. Since the proposed modifications are needed for the uprate, this criterion is satisfied. Thomas pf. at 3; *see* Docket No. 6812, Order of 3/15/04 at 20-22.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

12. The proposed modifications are in conformance with the system upgrades that ISO-NE directed Entergy to undertake to ensure that there will be no adverse impact on system stability and reliability as a result of the power uprate. In its Order approving the uprate, the Board required Entergy to make these changes to ensure system stability and reliability. Thomas pf. at 8; *see* Docket 6812, Order of 3/15/04 at 23-24, 119.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

13. The costs of electrical and transmission improvements will be borne only by Entergy. Thomas pf. at 8.

14. The Board has found that the uprate, as conditioned by the Board, will provide an economic benefit to the state. Since the proposed modifications are needed for the uprate to occur, this criterion is satisfied. Thomas pf. at 8; *see* Docket No. 6812, Order of 3/15/04.

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

[30 V.S.A. § 248(b)(5)]

15. 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 16 through 35, below, which are the criteria specified in 10 V.S.A. §§ 1424(a)(d) and 6086(a)(1)-(8)(a) and (9)(k).

Outstanding Resource Waters

[10 V.S.A. § 1424(a)(d)]

16. The Project is not located on any segment of water that has been designated an outstanding resource waters by the Water Resources Board. Thomas pf. at 15.

Water and Air Pollution

[10 V.S.A. § 6086(a)(1)]

17. The only potential for air pollution is leakage of sulfur hexafluoride gas contained within the replacement 381 breaker. Because the potential leakage is less than the action level for fluoride compounds, the discharge is not subject to regulation under Vermont Air Pollution Control Regulation 5-261. Thomas pf. at 9.

18. There will be no process emissions or noxious odors resulting from the improvements. The replacement 381 breaker produces an audible noise when the breaker opens; however, this noise is similar to the existing breaker and is not audible outside the switch yard. Thomas pf. at 9.

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

19. The Project is located near the Connecticut River on a site that has been extensively developed for Vermont Yankee, and is not in the watershed for a surface water designated public water supply and is not in a significant aquifer recharge area. Thomas pf. at 9.

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

20. The only waste will be construction waste, which will be disposed of at a certified solid waste facility. Thomas pf at 10.

21. No waste water will be generated by the proposed improvements. Thomas pf. at 10.

22. No part of the Project will occur in or near surface waters or affect storm water discharge in any way. Thomas pf. at 10.

23. The Project does not require a construction site run-off general permit. Thomas pf. at 10.

24. Neither radioactive waste nor hazardous waste will be generated by the proposed modifications. Thomas pf. at 10-11.

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

25. The proposed modifications will not use any water. Thomas pf. at 11.

Floodways, Streams, and Shorelines

[10 V.S.A. §§ 6086(a)(1)(D)(E) &(F)]

26. The area of the proposed modifications is not located near the Connecticut River or any other streams or water ways. Thomas pf. at 11.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

27. No wetlands occur in the vicinity of the proposed modifications. Thomas pf. at 11.

Sufficiency of Water and Burden on Existing Water Supply

[10 V.S.A. §§ 6086(a)(2)&(3)]

28. There are no water requirements needed for the proposed Project. Thomas pf. at 11.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

29. No excavation or paving will be required in order to implement the proposed improvements. Thomas pf. at 12.

Transportation Systems

[10 V.S.A. § 6086(a)(5)]

30. The proposed modifications will not change site access or increase daily traffic flows to and from the switch yard, and will not require any additional parking spaces. Thomas pf. at 12.

Educational Services

[10 V.S.A. § 6086(a)(6)]

31. No additional educational services will be required by the facility as a result of the proposed modifications. Thomas pf. at 12.

Municipal Services

[10 V.S.A. § 6086(a)(7)]

32. No additional municipal services will be required as a result of the proposed modifications. Thomas pf. at 12.

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

[10 V.S.A. § 6086(a)(8)]

33. The appearance of the site will not change as a result of the proposed modifications, and no new lighting will be installed in connection with this project. Thomas pf. at 13.

Necessary Wildlife Habitat and Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

34. The modifications will take place within the existing switchyard or the Protected Area, and will therefore not have any adverse impact on wildlife habitat or endangered species. Thomas pf. at 13.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

35. The proposed modifications are not adjacent to and will not impact any public areas or investments. Thomas pf. at 14.

Least-Cost Integrated Resource Plan

[30 V.S.A. § 248(b)(6)]

36. The Board has determined that, as a wholesale utility that does not distribute electricity to the public, Entergy is not required to prepare or submit for approval an integrated resource plan. Consequently, this criterion is not applicable. *See* Docket No. 6812, Order of 3/15/05.

Compliance with Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

37. The Department has determined, in a letter dated March 17, 2004, that the proposed Project is consistent with the Vermont 20-Year Electric Plan, pursuant to 30 V.S.A. § 202(f), provided that the conditions the Department has recommended, and listed in the introduction, above, are met.

Outstanding Resource Waters

[30 V.S.A. § 248(b)(8)]

38. The Project is not located on any segment of water that has been designated an outstanding resource waters by the Water Resources Board. Thomas pf. at 15; *see* finding 16, above.

Existing or Planned Transmission Facilities

[30 V.S.A. § 248(b)(10)]

39. The proposed modifications will improve transmission facilities to accommodate the increased output associated with the extended power uprate proposal without any undue adverse effect on Vermont utilities or customers. Thomas pf. at 16.

Executive Order # 52 – Agricultural Land

40. The proposed improvements will be made within the existing switchyard or the Protected Area. Therefore, the improvements will not have an adverse effect on the agricultural potential of soils at the site. Thomas pf. at 16.

III. CONCLUSION

Based upon all of the above evidence, we conclude that 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 by 30 V.S.A. § 248(j); and the proposed project will promote the general good of the state. We further conclude that the conditions requested by the Department should be included in the CPG.

IV. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that the proposed modifications, in accordance with the evidence and plans presented in this proceeding and the conditions suggested by the Department, 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 shall be issued in the matter.

Dated at Montpelier, Vermont this 19th day of March, 2004.

<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: March 19, 2004

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.