

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

Docket No. 6860

Petitions of Vermont Electric Power Company, Inc. (VELCO) and Green Mountain Power Corporation (GMP) for a certificate of public good, pursuant to 30 V.S.A. Section 248, authorizing VELCO to construct the so-called Northwest Vermont Reliability Project, said project to include: (1) upgrades at 12 existing VELCO and GMP substations located in Charlotte, Essex, Hartford, New Haven, North Ferrisburgh, Poultney, Shelburne, South Burlington, Vergennes, West Rutland, Williamstown, and Williston, Vermont; (2) the construction of a new 345 kV transmission line from West Rutland to New Haven; (3) the reconstruction of a portion of a 34.5 kV and 46 kV transmission line from New Haven to South Burlington; and (4) the reconductoring of a 115 kV transmission line from Williamstown to Barre, Vermont **AND** amendment to VELCO petition to provide for: (1) proposed modifications to the route of the line between New Haven and South Burlington, specifically in the City of Vergennes and the Towns of Ferrisburgh, Charlotte and Shelburne; (2) proposed changes to the substations located in Vergennes, Shelburne, Charlotte and South Burlington; and (3) proposed changes to pole heights.

**PROPOSED FINDINGS AND BRIEF
FERRY ROAD**

SUBMITTED BY PETITIONERS

**VERMONT ELECTRIC POWER COMPANY, INC.
AND
GREEN MOUNTAIN POWER CORPORATION**

DECEMBER 17, 2004

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I. INTRODUCTION

OVERVIEW

On July 2, 2004 the Public Service Board (the “Board”) opened a design detail phase of this docket. The design detail proposed by the Vermont Electric Power Company (“VELCO”) adopted the proposal filed by the Department of Public Service (the “DPS”) for the overhead crossing at Ferry Road. Because this proposal potentially impacted several land owners on the east side of the railroad tracks, four of whom indicated an interest in participating in the hearings, the Board scheduled separate hearings and a separate briefing schedule for the Ferry Road area (see Board Order dated 10/21/04). Below are VELCO’s proposed Findings of Fact and Discussion regarding the Ferry Road area of the Town of Charlotte.

Findings of Fact

Ferry Road Crossing (Mile 16.6)

1. The Ferry Road area is an industrial site in the industrial zone of Charlotte, and the Waldorf School is located next to an existing transmission line and an active railroad corridor. Tr. 9/22/04 Vol I, at 97-98 (Emerson); Tr. 12/2/04, at 48-49 (Dunn).
2. The existing GMP 34.5 kV line enters the Waldorf School parcel on Route F-5 and spans the school parking lot. VELCO Exhibit TJB-4 at 9.
3. VELCO's original proposal (filed on 6/6/03) was to depart from the 34.5 kV corridor at about GMP pole 266, and locate the 115 kV line west of the storage shed on the Waldorf School property to a new angle structure in the Route F-5 right-of-way ("Original Proposal"). Boyle pf., at 14-15; VELCO Exhibit TJB-4 at 9.
4. The Original Proposal would avoid the Waldorf schoolyard and athletic fields and would make the new 115 kV circuit less visible from the Waldorf School. This option will not cause an undue adverse impact on aesthetics. Boyle pf., at 14-15; VELCO Exhibit TJB-4 at 9.
5. In its Reroute filing (filed 2/6/04), in connection with its proposal to relocate the Charlotte substation, VELCO proposed a route that would move the line further west to follow a planted tree row at the western edge of the Waldorf School ("Reroute Proposal"). The line would then cross Ferry Road near the access road to the train station. There would be an angle structure 300' north of Ferry Road and east of the forty to fifty foot tall willow trees that would provide some visual mitigation. The line would then head northeasterly to enter the new substation location. Boyle Supp. pf at 6; VELCO Exhibit TJB-Supp(1)-1, Photo #18 & 19.
6. The Reroute Proposal relocates the 115 kV line away from the existing corridor adjacent to the Waldorf School. A tall structure, necessary to clear distribution lines on the south

side of Ferry Road could be located back from the road approximately seventy feet and therefore, largely hidden from Ferry Road west and backgrounded from Ferry Road east by the previously mentioned hedgerow. The willows associated with wetlands several hundred feet north of Ferry Road would provide more screening for a new angle pole. The Reroute Proposal would continue northeast into the new substation location. The 12.5 kV distribution service from the substation would follow the existing 34.5 kV corridor back to Ferry Road. The removal of the existing GMP substation adjacent to Ferry Road may allow for flexibility in the location of GMP's 12.5 kV distribution poles as they serve east and west along Ferry Road. This Reroute Proposal alternative would not cause an undue adverse impact on the aesthetics of the Ferry Road area. Boyle Supp. pf at 6, 8.

7. The Reroute proposal could be constructed with a portion of the distribution line undergrounded so that the height of the transmission poles could be reduced significantly. Tr. 12/3/04 Vol I, at 58-59 (Boyle).
8. Department of Public Service aesthetic witness David Raphael first recommended locating the new 115 kV line to the east of the railroad tracks in his testimony (5/20/04) regarding the Reroute filing ("DPS Proposal"). VELCO proposed a design at the Ferry Road crossing in accordance with the DPS Proposal in its Design Detail testimony (9/14/04). DPS-DR-10, at 39; VELCO Exhibit Dunn/Harr-DD-10 & 11.
9. With the DPS Proposal the 115 kV line would run north along the west side of the railroad tracks until pole 26, just south of the Waldorf School. The line would cross the railroad tracks to pole 27, which is located on the east side of the tracks and across from the Waldorf School. The line would then cross back to the west side of the railroad tracks, where pole 28 is located. The line would cross Ferry Road, and back to the east side of the tracks to pole 29. The line would then return to the east side of the tracks at pole 30. Tr. 6/10/04 Vol. I, at 53-54 (Dunn); VELCO Exhibit Dunn/Harr-DD-10 & 11.

10. VELCO provided two versions of the DPS Proposal in its Design Detail filing. The first with the distribution line running along Ferry Road remaining above ground, and the second with one span of distribution line undergrounded where the 115 kV transmission line crossed Ferry Road Dunn & Harr DD pf., at 6; VELCO Exhibit Dunn/Harr-DD-10 & 11.
11. Green Mountain Power (“GMP”) estimated the cost to place one span of their distribution facilities underground at approximately \$79,200. This estimate does not include the cost of placing the Verizon and Adelphia facilities underground. Dunn & Harr DD pf., at 11.
12. There is a possibility that poles 27 and 28 in the DPS Proposal could be moved closer to the railroad tracks, allowing more of the existing vegetation on the east side of the tracks to remain. Tr. 12/3/04 Vol. I, at 47-48, 53-54 (Boyle).
13. Neither of the two options for the DPS Proposal would have an undue adverse impact on aesthetics. Boyle & Portz DD pf., at 4.
14. VELCO has continued to evaluate other routes through this area. One alternative is to locate the new line to the west of the railroad tracks but to the east of the Waldorf School. This alternative could be constructed with or without the distribution line undergrounded. Tr. 12/2/04, at 18-19 (Dunn).
15. The second alternative is to locate the new 115 kV line in the same location as the existing 34.5 kV line. It would run to the west of the school but to the east of the school’s shed, and then cross over to the east side of the tracks as it crosses Ferry Road. This alternative could be constructed with or without distribution underbuild. These alternatives require VELCO and the Waldorf School to reach an accommodation. Tr. 12/2/04, at 18-19 (Dunn).
16. The DPS agrees that it would be possible for a route that takes the line to the west of the railroad tracks but to the east of the Waldorf School to pass the Quechee Test. Tr. 12/2/04, at 120-21 (Raphael); Raphael DD pf., at 10.

17. In the absence of an agreement with the Waldorf School on an alternative overhead route, VELCO's current preference for the Ferry Road crossing is the Reroute Proposal that would take the new line to the west of the field adjacent to the Waldorf School. Tr. 12/2/04, at 18 (Dunn).
18. There are a number of viable overhead alternatives to cross Ferry Road that satisfy the Quechee Test, including the Reroute and the DPS Proposals. Tr. 2/13/04 Vol. I, at 58-59.
19. The Town of Charlotte has proposed two undergrounding routes in the Ferry Road area. The first undergrounding alternative would take the line to the east of the railroad tracks. The second alternative goes to the west of the fields adjacent to the Waldorf School near Country Home Products facility. Aabo DD pf., at 2; Donovan DD pf., at 4-6.
20. An underground alternative could satisfy the Quechee Test. Donovan DD pf., at 4-6; Raphael DD pf, at 10.
21. The cost of undergrounding 115 kV transmission is a serious consideration. The Town of Charlotte estimated the cost of undergrounding the 115 kV line to be 7.3 to 8.8 times the cost of the overhead line. This does not include the cost of special construction techniques or additional environmental and archeological evaluations. Dunn Reb. pf. at 8-9; Charlotte Aabo DD-1-4 (supplemented); See 11/24/04 VELCO Findings of Fact, finding 656 through 667.
22. None of the incremental cost of undergrounding is eligible for regional cost recovery. See 11/24/04 VELCO Findings of Fact, finding 631 through 645.
23. None of the potential environmental or archeological impacts associated with undergrounding the transmission line have been addressed. Tr. 8/4/04, Vol. I, at 21-22, 40 (Frink); See 11/24/04 VELCO Findings of Fact, finding 656 through 667.
24. A reasonable person would consider cost in evaluating whether a generally available mitigating step should be taken to reduce the aesthetic impacts of a project. Donovan DD pf. at 6.

25. A reasonable person would opt for the least expensive measure to accomplish necessary mitigation. Raphael Surr. at 15.
26. Cost must be taken into account in assessing the reasonableness of available mitigation. Tr. 7/29/04, Vol II at 84-85 (Boyle).
27. The four intervening Ferry Road landowners were concerned with potential adverse health effects from the 115 kV line in the DPS Proposal. Tr. 12/3/04 Vol I, at 19 (Booher), 30-31 (Durett), 40-41 (Poulin); 12/6/04, at 20 (Hughes).
28. “[I]n comparison to the international, national and state standards and guidelines on EMF exposure levels. . . , the EMF levels [for the VELCO Project] (both the maximum levels and at the right-of-way edge) are considerably below what is permissible by the guidelines.” None of the alternatives proposed or being considered by VELCO or the DPS will have an undue adverse impact on public health and safety. Valberg pf. at 22; Exhibit DPS-VDH-3 at 11; See VELCO 11/24/04 Findings of Fact, findings 261 through 290.
29. The Charlotte Town Plan states that “[i]t is the objective of the Town that all utilities will be underground” (P. 48); “the Town seeks to protect public roads with high scenic value by placing utility transmission lines underground” (P. 99); and that “the Town will explore ways to encourage underground placement of utility transmission lines” (P.99). Charlotte’s objectives and policies do not constitute an absolute requirement that undergrounding be exercised, leaving open other options for mitigation. VELCO Exhibit DR-16, at 48 & 99; DPS Exhibit DR-1 at 135. The Town Plan is ambiguous because it is not clear whether its intent is to place transmission lines or distribution lines underground. Tr. 2/20/04 Vol. II, at 76-82.
30. Although all of the overhead options discussed above satisfy the Quechee Test, if in preparing final design none of the overhead routes prove to be feasible, the two underground alternatives would also satisfy the Quechee Test. See findings 2, 4, 11, 13 & 16.

31. Regardless of the alternatives for crossing Ferry Road, none of them will have any design implications for the rest of the line either north or south (“ripple effects”) if the Board were to adopt them. Furthermore, the evidence provided in the design detail hearings demonstrates that the post-certification process shall not be unreasonably difficult. Tr. 12/2/04, at 69-73.

Discussion

Based on the above findings, the Board should conclude that this proposed project will not have an undue adverse effect on the aesthetics or scenic and natural beauty of the Ferry Road area. In reaching this conclusion, the Board should rely on the Environmental Board’s methodology for determination of “adverse” and “undue adverse” effects on the aesthetics and scenic and natural beauty as outlined in the so-called Quechee analysis. Re: Quechee Lakes Corporation, #3W0411-EB and 3W0439-EB, Findings of Fact, Conclusions of Law, and Order (Nov. 4, 1985) and the Board’s subsequent Memorandum of Decision on Reconsider Motions (Jan. 13, 1986); 30 V.S.A. § 248(b)(5).

The Quechee analysis is a two-part test to determine (1) whether the project will have an adverse aesthetic effect, and, if so (2) whether the adverse effect is undue. Id.; *see also*, Re: Barre Granite Quarries, LLC, Application #7C1079 (Revised)-EB, Findings of Fact, Conclusions of Law, and Order at 79-82 (Dec. 8, 2000). A proposed project would have an adverse impact on the aesthetics of the area if its design is out of context or not in harmony with the area in which it is located. If a project “fits” its surroundings and context, it will not have an adverse aesthetic effect. Re: John J. Flynn Estate and Keystone Development Corporation, Land Use permit Amendment #4C0790-2-EB, Findings of Fact, Conclusions of Law, and Order at 23-26 (May 4, 2004). If it is found that the aesthetic impact of the proposed project would be “adverse,” the determination of whether such impact would be “undue” turns upon whether the proposed project: (1) violated a clear written community standard intended to preserve the aesthetics or scenic beauty of the area, or; (2) if it would offend the sensibilities of the average

person or be “shocking”, or; (3) if generally available mitigating steps were not taken to improve the harmony of the proposed project with its surroundings. Barre Granite, *supra* at 80-82. This 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.

In the Board’s July 2, 2004, Order establishing the Design Detail phase of this case, the Board required that Petitioners submit adequate evidence for nine specific locations to satisfy three requirements. First, there must exist an alternative for each location that will satisfy the Quechee Test (“Show-stopper”). Docket No. 6860, 7/2/04 Order, at 4. Second, none of the alternatives that might be selected by the Board should cause any design implications for the rest of the line (“Ripple effects”).¹ *Id.* Finally, the cumulative evidence presented during the Design Detail hearings needs to demonstrate that the post-certification process will not be unreasonably difficult due to problems associated with aesthetic mitigation. *Id.*; see also Tr. 12/2/04, at 70-71 (Dworkin).

The Ferry Road crossing is an industrial location with an existing transmission line, substation, railroad and commercial/industrial development within the industrial zone of Charlotte. The crossing is difficult because the Waldorf School chose to locate adjacent to a power line corridor and railroad, both of which have been there for decades, and Vermont has historically and appropriately treated schools differently than other non-residential property in Section 248 proceedings. (Although in this case, because the Waldorf School is a private school and the record contains no evidence of any “public investment,” it is arguable that the deference typically accorded to schools is not required by statute).

The extensive evidence concerning this area demonstrates that Petitioners have made a good faith effort to propose a crossing that both satisfies the Quechee Test and addresses the concerns of the Town and the adjoining landowners. Petitioners proposed no less than three different overhead routes, each with several variations. Petitioners have proposed moving the

¹ “However, these sites seem particularly significant in terms of potential "show-stopper" or "ripple effects" on other parts of the proposal.” Docket No. 6860, 7/2/04 Order, at 4.

existing substation, which all agree is a distinct improvement. The DPS's last minute withdrawal of support for its own proposal left Petitioners without a "final choice" for an overhead configuration in the Design Detail phase. However, Petitioners have been working on at least two additional possible proposals that require agreement from the Waldorf School.

There was ample evidence presented that there are a number of design alternatives for the Ferry Road crossing that satisfy the requirements of the Board's July 2 order. The Ferry Road location is not a "show-stopper" because VELCO has demonstrated that the 115 kV line can be designed and constructed through this area in compliance with the Quechee Test. Furthermore, none of the proposed alternatives for the Ferry Road crossing will cause any "ripple effects." Lastly, the evidence presented demonstrates that, although consensus has not yet been reached as to the exact route and design, the final design review and post-certification process will not be unreasonably difficult.

Of the overhead alternatives, certain design changes could help to further alleviate the aesthetic impact. For instance, undergrounding of distribution lines could both mitigate the impact that those facilities have on the aesthetics of the area and lower the transmission pole heights. The relocation of the substation away from Ferry Road will also improve the aesthetics of the area. Additionally, the DPS has suggested a configuration of the poles that could possibly allow for the height to be reduced even further. Both Mr. Raphael and Mr. Boyle agree that it is possible to construct the line overhead and satisfy the Quechee Test. The Town has not offered any evidence that the line cannot be constructed overhead in accordance with the Quechee Test.

The cost of undergrounding the transmission line is approximately eight times as expensive as the cost of constructing the line overhead. It is Petitioners' responsibility to propose the least cost solution that satisfies the statutory criteria. It is undisputed that ratepayers will pay the cost of this project, and it is virtually certain that it will be Vermont ratepayers who pay the incremental cost of undergrounding the transmission line. The Town has not proposed that it pay for any portion of the cost of undergrounding.

There is no requirement in Charlotte's Town Plan that this line be built underground such that it constitutes a "clear community standard." The language regarding undergrounding utilities most likely refers to distribution facilities in subdivisions. The very recent history of the distribution rebuild along Ferry Road conclusively demonstrates that even Charlotte does not believe undergrounding of all electric lines is required. The Charlotte Town Plan uses the words "transmission lines" in a context that makes it pretty clear that the intent was to apply to distribution facilities "along roads." The Plan by its terms seeks to "encourage underground placement..." not to require it. Such encouragement, of course, would be most effective if the Town proposed to help pay the cost of such underground placement. To the extent that the Charlotte Town Plan is vague or contradictory, it cannot, by definition, be a "clear community standard."

Petitioners should be afforded an opportunity in final design to prepare an overhead alternative. If Petitioners, or ultimately the Board, become convinced that there simply is no overhead alternative, then the Board can order Petitioners to design and file an underground proposal that, while significantly more costly, satisfies the statutory criteria.

Therefore, the Board should find that the 115 kV transmission line can be built through the Ferry Road crossing without an undue adverse impact on aesthetics or on public health and safety.

DATED at Montpelier, Vermont this 17th day of December, 2004.

VERMONT ELECTRIC POWER COMPANY, INC.

AND

GREEN MOUNTAIN POWER CORP.

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