

**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 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 construction of a 115 kV transmission line to replace 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

**SUPPLEMENTAL PREFILED TESTIMONY OF  
TERRENCE J. BOYLE**

**ON BEHALF OF  
VERMONT ELECTRIC POWER COMPANY, INC.**

The purpose of Mr. Boyle’s testimony is to address the visual impacts of the proposed route revisions and substation changes to the Northwest Vermont Reliability Project.

**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 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 construction of a 115 kV transmission line to replace 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

**SUPPLEMENTAL PREFILED TESTIMONY OF  
TERRENCE J. BOYLE**

**ON BEHALF OF  
VERMONT ELECTRIC POWER COMPANY, INC.**

1 Q1. Please state your name and occupation.

2 A1. My name is Terrence J. Boyle. I am a professional landscape architect and planning  
3 consultant with offices in Burlington, Vermont. I reside in Huntington, Vermont.

4

5 Q2. Have you previously testified in this proceeding?

6 A2. Yes.

7

8 Q3. Please state the purpose of your testimony.

9 A3. The purpose of my testimony is to address aesthetic and visual impacts of the  
10 improvements to VELCO’s Public Service Board filing on June 5, 2003 with regard to  
11 the Northwest Vermont Reliability Project. The proposed improvements change the  
12 location and configurations of the 115 kV line and substations in several locations. The  
13 revisions to the route are described fully in the testimony of Mr. Tom Dunn and Mr.  
14 Terry Cecchini. The design details of the line and the substations are addressed by Mr.  
15 David Boers.

1 Q4. Have you prepared photo exhibits to accompany your description?

2 A4. Yes, they are attached as VELCO Exhibit TJB-Supp(1)-1.

3

4 Q5. Please describe the areas you evaluated in the new corridor that bypasses Vergennes?

5 A5. Upon leaving the New Haven Substation the proposed 115 kV line will proceed as  
6 originally proposed until mile 2.9 where the existing 46 kV corridor departs for  
7 Vergennes. The proposed 115 kV transmission line will now continue north following  
8 the railroad corridor through Ferrisburgh and into the City of Vergennes. In Vergennes,  
9 the line will leave the railroad corridor near Kennedy Brothers Factory, and traverse a  
10 few spans to the new location of the VELCO Vergennes Substation.

11

12 Q6. Please describe the road crossings you evaluated in your review of the revised corridor in  
13 this segment?

14 A6. Route 17 is the first crossing that I will discuss. Coming out of the New Haven  
15 substation VELCO now proposes using "H" frame structures rather than single pole 115  
16 kV delta configurations. This has aesthetic advantages of longer spans that will allow  
17 matching pole placements side by side with the existing 115 kV Williston circuit.  
18 Although the angle structure north of Route 17 will need to be a three pole structure, it  
19 will be similar in scale and form to the existing "H" frame. There would be two  
20 additional "H" frames in the CVPS corridor to Vergennes before the transition to single  
21 pole structures. This will occur beyond the tree line and out of view from Route 17. See  
22 VELCO Exhibit TJB-3A Photo 57 or VELCO exhibit TJB-4A Photo 1 in VELCO's June  
23 5, 2003 filing.

24 The second road crossing north of the substation along the new corridor is at  
25 Lime Kiln Road in New Haven, a paved bridge crossing over the tracks in an open  
26 agricultural landscape. Taller poles are needed to clear the existing distribution line.  
27 There is little opportunity to screen these structures because of the open landscape. They

1 will be most noticeable to people traveling south on Lime Kiln Road. VELCO Exhibit  
2 TJB-Supp(1)-1, Photos # 1 and 2.

3 The third road crossing is at Plank Road (New Haven) which is an area of  
4 transition from agricultural to residential land use. From the east, the line will be well  
5 screened on both sides of the road with brush and trees. As one approaches the tracks  
6 from the east, the screen opens to the left but the poles along the track will be in the  
7 driver's peripheral vision. A tall pole on the north side of Plank Road will be necessary  
8 to clear the existing distribution line. This distribution line is already high because of  
9 railroad clearance requirements. The new 115 kV pole will be somewhat mitigated by an  
10 existing fifty foot high hedgerow of trees to the north of the crossing on the east side of  
11 the tracks. There will be some backgrounding from the west as well as a screen from the  
12 east. Selective clearing on the west side will retain vegetation in the twelve to fifteen  
13 foot range and additional screening is provided by hardwoods further west on the north  
14 side of the road. This is an on grade crossing with stop signs which requires the driver's  
15 attention. There are no residences in the immediate vicinity. VELCO Exhibit TJB-  
16 Supp(1)-1, Photos # 3 and 4.

17 The next crossing is over a bridge on Middlebrook Road in the town of  
18 Ferrisburgh. The railroad is in a relatively deep cut with homes on both sides of the track  
19 to the east of the road. One house on the west side of the tracks is approximately one  
20 hundred feet from the proposed line . This is a suburbanizing landscape with houses  
21 along both side of the dirt road. The railroad is flanked with brush and a few trees and  
22 the bridge is narrow enough to require the driver's attention. Selective clearing will be  
23 used and some plantings may be justified at the bridge approaches and will be  
24 determined when the pole locations are designed. VELCO Exhibit TJB-Supp(1)-1,  
25 Photos #5, 6, 7 and 8.

26 Continuing along the west side of the railroad, the line crosses Monkton Road in  
27 Ferrisburgh. The railroad crossing is on grade with warning lights. There is a house on  
28 the west side of the tracks necessitating an angle structure to move the line from the

1 southwest side to the northeast side of the road/railroad intersection. The line will cross  
2 on two relatively tall poles in order to clear distribution and telephone lines. The  
3 transmission line needs to cross the railroad at this location because of another house and  
4 barns on the south side of Monkton Road and east of the railroad. I am recommending  
5 optimum pole placement and selective clearing to minimize skylining in the driver's cone  
6 of vision. Some planting may be justified upon the completion of the line design.  
7 However, there is good screening on the Monkton Road approaches in both directions.  
8 VELCO Exhibit TJB-Supp(1)-1, Photos #9, 10, 11 and 12.

9 The corridor continues northerly along the tracks for a few hundred yards before  
10 crossing Route 7 in an open stretch of highway (VELCO Exhibit TJB-Supp(1)-1, Photo  
11 #13). I recommend the maximum possible span here since there are no distribution lines  
12 to necessitate 115 kV structures near Route 7 and therefore, the poles can be set back  
13 from the crossing and should then be on the periphery of the drivers' cone of vision. The  
14 line continues on the east side of the tracks to the industrial complex that includes  
15 Kennedy Brothers and the grainery south of Route 22A in the City of Vergennes. This  
16 area has a tight configuration of buildings that could possibly dictate the use of steel pole  
17 construction. VELCO Exhibit TJB-Supp(1)-1, Photo #14. After passing the grain  
18 elevator an angle structure will support the conductors that cross over Route 22A just  
19 south of the railroad trestle. This span would be approximately four hundred fifty feet to  
20 the take off pole into the Vergennes 115 kV VELCO substation located near Kayhart  
21 Crossing. The substation lot is a flat plateau mostly screened by softwoods and  
22 hardwoods to the south and west, offering excellent screening from Route 22A and the  
23 surrounding area. The crossing from the railroad to the substation is not expected to be  
24 noticeable from Route 22A. VELCO Exhibit TJB-Supp(1)-1, Photo #15. The angle  
25 structure at the tracks will fit in with the existing grain elevator. VELCO Exhibit TJB-  
26 Supp(1)-1, Photo #16. Because of the road curvature and a proposed evergreen planting  
27 near the top of the highway embankment west of Route 22A on the proposed site, the  
28 substation will not be visible. The relationship of the substation site to the above-

1 mentioned grain elevator is depicted in VELCO Exhibit TJB-Supp(1)-1, Photo #17. From  
2 the substation the 115 kV line would head north by following the hedgerow on the east  
3 side of the lot and rejoin the railroad corridor at mile 7.8, where the 115 kV line in the  
4 original filing joined the railroad. The proposed railroad station/commuter lot on the east  
5 side of the tracks can be screened by existing and proposed vegetation west of the tracks.  
6 The GMP 34.5 kV line, which connects to the existing GMP Vergennes Substation,  
7 would exit the substation northerly for two spans, then angle to the west ninety degrees to  
8 follow an east-west lot line and a driveway for approximately sixteen hundred feet to the  
9 existing 34.5 kV GMP corridor on Botsford Road.

10  
11 Q7. In your opinion, does the Vergennes reroute you have described, including the new  
12 proposed substation, meet the Quechee test?

13 A7. Yes, if screened as I have testified, the proposal meets the Quechee test.

14  
15 Q8. What is your assessment of the revised Ferrisburgh route that utilizes the existing GMP  
16 corridor and avoids the neighborhood at Little Chicago Road?

17 A8. This will be an obvious aesthetic improvement for the neighborhood. The section of 115  
18 kV line from mile 7.8 to 8.9 is the same as originally proposed in the previous filing. At  
19 mile 8.9 the line leaves the railroad corridor and heads northwest for thirteen hundred  
20 feet until it joins the existing 34.5 kV corridor just south of the intersection of Avery  
21 Road. The route from mile 8.9 to the Avery Road intersection is located well with good  
22 potential for concealment due to the topography of the area. The reroute would then  
23 follow the existing 34.5 kV corridor until mile 9.75, where it meets up again with the  
24 railroad corridor. The existing 34.5 kV corridor is out of sight and is the corridor  
25 preferred by the Ferrisburgh community.

26  
27 Q9. What are the changes proposed in Charlotte?

1 A9. A variation of the previously filed plan at the Waldorf School (mile 16.65) is proposed  
2 which will move the line further west to follow a planted tree row at the western edge of  
3 the Waldorf School. The line is proposed to cross Ferry Road near the access road to the  
4 train station. (VELCO Exhibit TJB-Supp(1)-1, Photo #18. There will be an angle  
5 structure 300' north of Ferry Road and east of the forty to fifty foot tall Willow trees that  
6 will provide some visual mitigation. (VELCO Exhibit TJB-Supp(1)-1, Photo #19. The  
7 line then heads northeasterly to enter the substation.

8 The location of the Charlotte substation has moved north to a new site adjacent  
9 the railroad at mile 17.0, which is approximately 850 feet north of the existing substation.

10  
11  
12 Q10. What are the aesthetic advantages of the revision at Charlotte?

13 A10. The relocation of the substation puts it out of the cone of vision for travelers on Ferry  
14 Road. It is now in a location where it can be readily screened with some planting to the  
15 southwest of the substation. The substation will also be backgrounded by topography  
16 and vegetation. An added advantage of the substation location is that the 115 kV line can  
17 be more readily relocated away from the existing corridor adjacent to the Waldorf  
18 School. A tall structure, necessary to clear distribution lines on the south side of Ferry  
19 Road could be located back from the road approximately seventy feet and therefore,  
20 largely hidden from Ferry Road west and backgrounded from Ferry Road east by the  
21 previously mentioned hedgerow. The willows associated with wetlands several hundred  
22 feet north of Ferry Road will provide more screening for a new angle pole. The line will  
23 continue northeast into the new substation location. The 12.5 kV distribution service  
24 from the substation will follow the existing 34.5 kV corridor back to Ferry Road. The  
25 removal of the existing GMP substation may allow for flexibility in the location of  
26 GMP's 12.5 kV distribution poles as they serve east and west along Ferry Road.

27  
28 Q11. Please describe the changes in Shelburne?

1 A11. To avoid the Fletcher Lane neighborhood, a new route is proposed on the west side of the  
2 McCabe Brook wetland behind the houses. The line will depart the 34.5 kV corridor at  
3 mile 21.56 and head northwest for two spans. The line then angles and heads north-  
4 northwest along the edge of the wetland, then turns to the northeast where it rejoins the  
5 existing corridor at mile 22.0, to the north of the Davis Park neighborhood.  
6

7 Q12. What are the aesthetic impacts associated with the Fletcher Lane alternative?

8 A12. The visual impacts will be minor since the area is predominantly a wetland associated  
9 with McCabe Brook. The entire Fletcher Lane bypass will require limited clearing  
10 because of low growing wetland species. The angles of the proposed line as well as the  
11 alder vegetation, which is close to Harbor Road and above eye height, will make it  
12 difficult to see the poles from Harbor Road. It may be possible in the final pole  
13 configuration to locate the 115 kV pole and lines further south and still clear the  
14 distribution lines along the south side of Harbor Road. (VELCO Exhibit TJB-Supp(1)-1,  
15 Photo #21.)  
16

17 Q13. What are the changes to the Shelburne substation?

18 A13. The substation in Shelburne has been reconfigured to avoid conflicts with the  
19 Ticonderoga Haul Road recreation path. The new substation arrangement reduces some  
20 of the visual clutter by introducing electrical cabinets and underground electrical  
21 connections. VELCO Exhibit TJB-Supp(1)-1, Photos #20, 21 and 22.  
22

23 Q14. Have you proposed screening for the redesigned Shelburne substation?

24 A14. Yes, because of the proposed changes there will be more opportunity to provide  
25 concealment from the recreation path to the west and from Harbor Road on the south.  
26 When surveying is conducted and the site plan for the substation is designed for  
27 construction we will provide mitigation planting plans to screen the yard from the east  
28 (VELCO Exhibit TJB-Supp(1)-1, Photo #20), the road frontage to the south and the

1 recreation path on the west (VELCO Exhibit TJB-Supp(1)-1, Photo #22). This will  
2 consist of wetland species on the east side along McCabe Brook and evergreen plantings  
3 in the six to eight feet range on the south and west sides.  
4

5 Q15. What are the changes to the Queen City Substation?

6 A15. The Queen City substation has been reconfigured to allow the proposed 115 kV line to  
7 enter the substation from the east rather than the south. This should remove conflicts  
8 with the Queen City Park neighborhood and the Champlain Water District right of way  
9 since the land and vegetation that currently separates the substation will be left intact.  
10

11 Q16. Will any mitigation be required at the newly configured Queen City substation?

12 A16. No, I do not believe so. The sub expansion is to the north, and all vegetation will remain  
13 between the expansion and Queen City Park Road. Upon completion of construction an  
14 under planting of Hemlock in the deciduous woods could be installed if the exposure is  
15 significant. All vegetation on the south side between the nearest residence and Maple  
16 Avenue will remain undisturbed because of the new Eastern entry into the substation.  
17

18 Q17. In summary, are these proposed changes improvements to the Project from an aesthetic  
19 perspective?

20 A17. Yes. While the original filing met the Quechee test with adequate screening, these  
21 modifications which are, for the most part, in response to discussions with and/or  
22 requests from the towns and landowners, represent aesthetic improvements over the  
23 original filing.  
24

25 Q18. Does this complete your testimony?

26 A18. Yes it does.  
27