

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Docket No. 7453

Joint Petition of Vermont Electric Power Company, Inc. )  
(VELCO), Vermont Transco LLC, Green Mountain )  
Power Corporation (GMP), and Vermont Electric )  
Cooperative, Inc. (VEC) for a Certificate of Public Good )  
pursuant to 30 V.S.A. § 248 authorizing them to upgrade )  
VELCO's Tafts Corners substation in Williston, )  
Vermont, and to Remove VEC's existing substation )

Hearing at  
Montpelier, Vermont  
November 20, 2008

Order entered: 1/7/2009

PRESENT: June E. Tierney, Esq., Hearing Officer

APPEARANCES: William Piper, Esq.  
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## **PROPOSAL FOR DECISION**

### **I. INTRODUCTION**

This case concerns a petition filed by Vermont Electric Power Company, Inc., Vermont Transco LLC (collectively referred to as ("VELCO"), Vermont Electric Cooperative, Inc. ("VEC"), and Green Mountain Power Corporation ("GMP") (together referred to as "Joint Petitioners") on July 18, 2008, requesting a certificate of public good ("CPG") pursuant to 30 V.S.A. § 248 to upgrade the VELCO Tafts Corners Substation in Williston, Vermont (the "Project"), and to allow VEC to retire its substation in Williston, Vermont.

In this Proposal for Decision, I recommend that the Public Service Board ("Board") approve the proposed Project and issue a CPG to the Joint Petitioners authorizing construction of the Project, subject to certain conditions as explained herein.

### **II. PROCEDURAL HISTORY**

On August 11, 2008, the Clerk of the Board informed the Joint Petitioners by letter that their petition would not be processed pursuant to § 248(j), but instead would receive a full § 248 review. In that same letter, the Joint Petitioners were advised that their petition had raised concerns about the potential need for aesthetic mitigation and the proposed cost allocation for the project.

On August 22, 2008, the Clerk of the Board noticed a prehearing conference in this matter for September 9, 2008.

On September 9, 2008, I held a prehearing conference in this Docket. Appearances were entered by Benjamin Marks, Esq. on behalf of GMP; Joslyn Wilschek, Esq. on behalf of VELCO; Sarah Hofmann, Esq., on behalf of the Vermont Department of Public Service ("Department"); and Judith Dillon, Esq., on behalf of the Vermont Agency of Natural Resources ("ANR"). VEC was not represented by counsel at this hearing.<sup>1</sup>

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1. A notice of appearance from Victoria J. Brown, Esq. on behalf of VEC was included with the joint petition that was filed on May 28, 2008, but Ms. Brown did not attend the prehearing conference. Mr. Pratt and Mr. Abendroth of VEC were present for the hearing.

On September 12, 2008, the Clerk of the Board sent a memorandum to the Joint Petitioners requesting additional information concerning aesthetic mitigation and the Project's proposed cost allocation.

On September 17, 2008, VELCO filed revised versions of Exhibits VELCO-Mallory-5 and VELCO-Mallory-6, as well as a replacement for Exhibit VELCO-Mallory-17.

On September 23, 2008, VELCO filed information in response to the Board's September 12 memorandum regarding cost allocation.

On October 15, 2008, a site visit was held in the afternoon at VELCO's Tafts Corners Substation (also referred to herein as the "Substation") and VEC's substation in Williston, Vermont. That evening, a public hearing was held in the Williston Town Hall Meeting Room. No members of the public attended either the site visit or the public hearing.

On October 24, 2008, VELCO filed supplemental testimony regarding aesthetic mitigation.

On November 5, 2008, VELCO, GMP and VEC filed supplemental testimony responding to questions posed by Board staff during the October 15<sup>th</sup> site visit.

On November 14, 2008, the Joint Petitioners, the Department and ANR filed a memorandum of understanding ("MOU") in which all the parties agreed that the Board should issue a CPG authorizing the construction of the Project.

On November 20, 2008, a technical hearing was convened in the Public Service Board's ("Board") 4<sup>th</sup> floor hearing room in Montpelier, Vermont.

### **III. FINDINGS**

Based on the substantial evidence of record and the testimony presented at the technical hearing, I hereby report the following findings to the Board in accordance with 30 V.S.A. § 8.

#### **Background and Project Description**

1. Petitioners are companies as defined by 30 V.S.A. § 201, and as such are subject to the Board's jurisdiction pursuant to 30 V.S.A. § 203.

2. VELCO's offices are located at 366 Pinnacle Ridge Road, Rutland, VT 05701. VELCO owns and operates most of the Vermont high voltage transmission network (115 kV and above). Petition at 1.

3. GMP's offices are located at 163 Acorn Lane, Colchester, Vermont. Petition at 1.

4. VEC's offices are located at 42 Wescom Road, Johnson, Vermont. Petition at 1.

5. GMP and VEC own subtransmission and distribution facilities in Chittenden County. Petition at 2.

6. The Project entails the installation of a 115/12.5 kV transformer in an existing, empty bay of VELCO's Tafts Corners Substation in Williston, Vermont, that would provide service directly to GMP and VEC customers in Chittenden County. Construction of the Project will also allow VEC to retire and decommission its existing Williston substation. Mallory pf. at 5-7.

7. The Project consists of the following additions within the existing fenced-in yard of the VELCO Tafts Corners Substation:

- (a) Three 115 kV circuit breakers and associated equipment.
- (b) 115 kV structural steel, buswork, and disconnect switches.
- (c) One new power transformer, rated capacity of 25/33.3/41.7 MVA, 115/12.47 kV, with +/- 10% Load Tap Changer.
- (d) One 12.47 kV indoor metalclad switchgear lineup consisting of two 3,000-amp bank breakers, ten feeder breakers, and one 3,000-amp bus tie breaker.
- (e) Protection, control and metering switchboards.
- (f) One transformer foundation and oil containment for the new transformer listed above.
- (g) Equipment foundations for cable riser stands, underground conduits, and cables.
- (h) Cable riser stands for the new transformer, and cable riser stands and disconnect switches to allow for a mobile transformer connection.
- (i) Second battery system to provide redundancy.
- (j) One take-off structure within the substation for the 12.47 kV and 34.5 kV circuits to exit from the south end of the substation.
- (k) One transitional structure within the substation for the existing 34.5 kV circuit.

Petition at 2; Mallory pf. at 2-3.

8. The proposed Project will supply a current load of approximately 12.5 MW from the 115 kV system and remove the same amount of load from the 34.5 kV system. This will defer the need for system improvements to the 34.5 kV network and 115/34.5 kV substations.

Mallory/Abendroth/Cecchini supp. pf. at 2.<sup>2</sup>

9. The Project includes two aesthetic mitigation measures that will have a significant, positive effect outside of the Substation yard. The first measure is the removal of the first two 34.5kV poles immediately south of the Substation that transition up to the 34.5 kV H-frame at the end of I-89. These poles will be replaced with a new take-off structure and a transitional structure built at a lower elevation within the Substation. Mallory pf. at 4.

10. The second aesthetic mitigation measure is the removal of VEC's Williston Substation, which will be rendered obsolete as a result of the Project. VEC will remove the substation structure in full, with the exception of a communications tower that will remain at the site.

Mallory pf. at 4; Abendroth pf. at 9.

11. Additionally, GMP and VEC will construct distribution upgrades outside of the substation that are related to the Project. Mallory pf. at 4; Cecchini pf. at 5; Abendroth pf. at 5-6.

12. GMP will install two new underground circuits connecting the existing control building at the Tafts Corners Substation with the area overhead distribution system on Route 2A and Route 2. VELCO installed the conduit for the portions of the circuits between the control building and the Substation boundary as part of the original Tafts Corners Project. GMP installed the conduit between the Linens & Things retail store and the overhead system in connection with other projects. As a result, new conduit is needed only for the approximately 550-foot distance between the substation boundary and Linens & Things. This conduit is to be located adjacent to the existing Tafts Corners Substation access road on previously disturbed land. GMP will install cable in the conduit system described above. Cecchini pf. at 5; exh. Green Mountain Power-Cecchini-3.

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2. The prefiled testimony of this Panel will be cited hereinafter as "Panel supp. pf. at \_\_\_".

13. The placement of new underground circuits, involving 550 feet of new conduit located entirely under previously-disturbed land, does not materially affect any Section 248 criteria. Cecchini pf. at 5-6.

14. VEC will construct two new three-phase distribution lines between the Tafts Corners Substation control house and the end of its existing overhead distribution line at Hurricane Lane in Williston in order to connect the Project to its distribution system. These new circuits will utilize a mix of underground and overhead construction. Abendroth pf. at 5.

15. VEC's underground construction will occur inside the fence of the existing Tafts Corners Substation. These underground lines will transition to overhead construction at a steel structure located inside the existing substation. The new lines will cross Interstate 89 ("I-89") on existing double-pole structures, one on each side of the highway. Abendroth pf. at 5.

16. Between the southbound side of I-89 and Hurricane Lane, the new lines will be constructed within the existing VELCO right-of-way. Both circuits will be placed on a cross arm to be added to the existing 34.5 kV transmission structures that were constructed with provisions for future distribution line construction. Abendroth pf. at 5.

17. VEC will install a tie-switch at the end of the new lines to facilitate breaker maintenance without interrupting service to its consumer-members. Abendroth pf. at 5.

18. In order to provide safe working conditions for the VELCO transmission line structures supporting the existing 34.5 kV line and VEC's proposed distribution circuits, VEC will install provisions for connection of a mobile substation in the vicinity of the LeClair Switch, a VEC facility that is sited at a location other than the Project site and VEC's Williston substation. This will allow for a mobile substation to be installed at this location when VELCO must perform maintenance on its transmission-line structures. VEC will install the mobile substation connection facilities after its Williston Substation is removed from service. Abendroth pf. at 6; tr. 11/21/08 at 56 (Abendroth).

### **Project Costs and Allocation**

19. VELCO's budget estimate for the Project is \$9.3 million. This estimate does not include the cost for VEC to retire its Williston Substation or costs associated with the distribution

upgrades that will be necessary as a result of this Project. Mallory pf. at 9; exh. VELCO-Mallory-7.

20. The costs for the distribution upgrades attendant to the Project are estimated to be between \$600,000 and \$700,000. Tr. 11/21/08 at 37 (Cecchini) and 38 (Abendroth).

21. The Petitioners have executed a cost-allocation agreement. Mallory pf. at 11; exh. VELCO-Mallory-9.

22. The Independent System Operator of New England, Inc. ("ISO-NE") has approved VELCO's request to treat up to \$2.25 million of the Project costs as Pool Transmission Facilities ("PTF") with New England regional rate treatment via ISO-NE's tariff. Mallory pf. at 11-12; exh. VELCO-EH-3.

### **The MOU**

23. On November 14, 2008, VELCO, VEC, GMP, the Department and ANR (collectively, "the Parties") submitted an MOU, in which the parties agree that the Board should issue a CPG for the proposed Project. Exh. Joint-1 at ¶2.

24. The Parties agree the Project is consistent with the general good of the State of Vermont and will not have an adverse effect on Vermont ratepayers. Exh. Joint-1 at ¶2.

### **Orderly Development of the Region**

[30 V.S.A. § 248(b)(1)]

25. The proposed Project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. This finding is supported by findings 26 through 30, below.

26. The Town of Williston and the Chittenden County Regional Planning Commission have received notice of the Project and have waived the 45-day advance notice requirement contained in 30 V.S.A. § 248(f). Mallory pf. at 17-18; exh. VELCO-Mallory-11; exh. VELCO-Mallory-12.

27. The Project is consistent with the 2006 Town of Williston Comprehensive Plan ("WCP"). The Town of Williston prefers an expansion of the Tafts Corners Substation site to accommodate energy infrastructure upgrades, rather than the development and use of new substation sites. The WCP anticipates upgrades to the VELCO transmission system located within the Town and specifically notes that the Tafts Corners Substation was designed to allow for the installation of two additional 115 kV to 12.5 kV step-down transformers. The WCP also acknowledges VEC's anticipated need for additional upgrades within the next five years, either as a joint-venture with GMP at the Tafts Corners Substation or in the form of a new substation. Mallory pf. at 16; tr. 11/21/08 at 21 (Abendroth).

28. The Chittenden County Regional Plan ("CCRP") that was adopted on August 28, 2006, contemplates improved transmission facilities as a means of supplying a larger share of that region's energy needs and fostering economic development in areas planned for development. Mallory pf. at 17-18.

29. The Project is designed to optimize the use of the existing utility infrastructure in Williston and to confine the proposed additional utility infrastructure within the existing substation yard. Mallory pf. at 16.

30. The Project is consistent with the CCRP. The Project is designed to improve the electric sub-transmission and distribution systems, making the electric infrastructure system more dependable. Mallory pf. at 17-18.

### **Need for Present and Future Demand for Services**

[30 V.S.A. § 248(b)(2)]

31. The Project is required 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. This finding is supported by findings 32 through 62, below.

**The Area of Need**

32. The "Area of Need" for the Project consists of the greater Williston area, which includes portions of Williston, St. George, Shelburne, and South Burlington. GMP and VEC provide distribution service to this area. In turn, VELCO's 115 kV transmission network and the area 34.5 kV sub-transmission network serve these distribution systems. Mallory pf. at 4-5; exh. VELCO-Mallory-6.

33. The Area of Need contains approximately 2,458 (GMP) and 1,011 (VEC) end-user accounts. VELCO's Tafts Corners Substation is a critical element of the transmission and distribution system in this area as it supports the 34.5 kV systems of GMP and VEC. Mallory pf. at 5-6.

34. VELCO delivers power to its substations at Tafts Corners and in Essex. These substations supply the sub-transmission and distribution systems of GMP and VEC. The 34.5 kV sub-transmission system feeds the area of need through GMP's Digital substation, its Essex substation and VEC's Williston substation. Mallory pf. at 5.

**GMP's Present and Future Demand**

35. GMP needs additional distribution capacity to meet the increasing loads in the Williston area and to reduce load on its Digital substation transformer to avoid an overloaded condition. Projected load growth in the Williston area is expected to exceed the normal operating capacity limits of the 43G2, 43G4, and 19G3 distribution circuits in 2009, as well as the capacity of the Digital substation transformer that supplies much of this load. Mallory pf. at 6; Cecchini pf. at 2-3; exh. Green Mountain Power-Cecchini-1.

36. GMP has been able to postpone the need for a new substation in the Area of Need for about a decade, but the lack of a distribution source near the Williston Area load center has become increasingly problematic. An additional source is needed to serve the Williston area in the near future. Cecchini pf. at 2-3; exh. Green Mountain Power-Cecchini-1.

37. The addition of two new distribution circuits will increase electric supply into the Williston area by approximately 14 MW, providing adequate capacity until the 2020s at present growth rates. Cecchini pf. at 2-3; exh. Green Mountain Power-Cecchini-1.

38. Proposed additional load from the expansion of Technology Park and other proposed loads in South Burlington, together with the projected Williston area growth, will lead to the overload of the Digital substation transformer. The Project will address this problem by transferring load from the Digital substation to the upgraded Tafts Corners Substation, thereby permitting the Digital substation to reliably serve the expected load increases. Cecchini pf. at 3; exh. Green Mountain Power-Cecchini-1.

### **VEC's present and future demand**

39. The existing VEC Williston substation is located near the intersection of Route 2A and Old Creamery Road in the Town of Williston. It was placed in service in 1969, and serves VEC's consumer-members in Williston, St. George and Shelburne. The substation has a nameplate rating of 5 MVA. Electric energy is delivered to this substation via a VEC 34.5 kV sub-transmission line extending from the LeClair Switch to the substation site. At the LeClair Switch, VEC connects to a jointly-owned GMP/VEC 34.5 kV line that originates at the existing Tafts Corners Substation. Mallory pf. at 7; Abendroth pf. at 3-4.

40. VEC's Williston substation has reached the end of its useful life and needs to be replaced or rebuilt to improve reliability, capacity, and safety. The nameplate capacity of VEC's substation is expected to be exceeded by 2011. The existing substation site is very congested, does not meet present-day National Electric Safety Code requirements for clearances to live parts, and does not meet present-day Williston zoning requirements. Maintenance of critical substation components cannot be performed without service interruptions. Abendroth supp. pf. at 2; Mallory pf. at 7; Abendroth pf. at 4.

41. Expansion of the existing Tafts Corners Substation eliminates the need for VEC to construct a separate substation and associated 34.5 kV transmission lines in the Route 2A corridor through Williston and St. George. In addition, two-thirds of the load served by the existing Williston Substation is located within one-half mile of the Project. Abendroth pf. at 4; Abendroth supp. pf. at 3.

**Alternatives to the Project**

42. For VEC, implementing an alternative to this Project would likely require VEC to proceed with engineering, permitting and construction of its own replacement substation and related new 34.5 kV sub-transmission lines, separate from the Tafts Corners and VEC Williston substation sites, instead of joining in the joint substation Project with GMP. Panel supp. pf. at 7-8.

43. VEC estimates that implementing an alternative project of this nature would cost \$7 million. Tr. 11/21/08 at 58-59 (Abendroth); exh. Board-2.

44. Reconstructing VEC's existing Williston Substation at its present site is not a viable option due to the small piece of property on which the substation is located, present-day Williston zoning concerns, and the transformation of the rural, agricultural area that once surrounded the substation site into a residential area. Abendroth supp. pf. at 2; Mallory pf. at 7; Abendroth pf. at 4.

45. Since the primary reason for VEC's participation in the Project is the replacement of an existing substation that is at the end of its useful life, there is no viable alternative to replacing the capacity of the substation to be retired. Alternative strategies such as energy efficiency measures or customer-owned generation will not eliminate the need to replace the function of the existing Williston Substation. Abendroth pf. at 4.

46. For GMP, implementing an alternative to the proposed Project would likely consist of a scaled-down expansion proposed for the Tafts Corners Substation for its own needs and would cost approximately \$8 million. Tr. 11/21/08 at 61 (Cecchini); exh. Board-1.

47. GMP investigated existing substation alternatives but found them electrically inferior to the proposed Project because they involved expansions at remote locations that would require additional distribution lines to reach the Williston load center. Exh. Green Mountain Power-Cecchini-2.

48. If a separate GMP facility were built in the Tafts Corners area close to GMP's expected load growth, GMP would require a green field site and likely face land-acquisition hurdles and lack of municipal support. Panel supp. pf. at 8.

49. The combined cost for VEC and GMP to implement independent alternatives is estimated to be \$15 million (i.e., \$7 million for VEC and \$8 million for GMP). Panel supp. pf. at 8.

50. At an estimated cost of \$9.3 million, implementation of the proposed Project will be approximately \$5.7 million less expensive than requiring VEC and GMP to implement independent alternatives (i.e., \$15 million - \$9.3 million = \$5.7 million). Panel supp. pf. at 8.

### **Alternative Configuration for the Project**

51. An alternative configuration of the Project within the VELCO Substation was examined during these proceedings (the "Alternative Configuration."). The Alternative Configuration consisted of substituting a 34.5/12.47 kV transformer for the Project's proposed 115/12.47 kV transformer, thereby supplying load from the 34.5 kV network instead of the 115 kV network. Panel supp. pf. at 2.

52. Compared to the proposed Project, the Alternative Configuration would increase the load on the 34.5 kV network by 12.5 MW in 2009 and an estimated 20 MW in 2018. Panel supp. pf. at 2-3.

53. From an engineering perspective, the Alternative Configuration is inferior to the proposed Project for four reasons: (1) it would negatively affect the 34.5 kV system and the 115/34.5 kV transformers supplying the local area 34.5 kV system; (2) it would needlessly require expansion of the existing substation site, which does not have enough space for the equipment proposed in the Alternative Configuration; (3) it will not reduce load on the existing 34.5 kV network, and would actually negatively affect that network by adding the load growth of the developing Williston area to it; and (4) it would trigger the need for additional investments in the local 34.5 kV sub-transmission network earlier than with the proposed Project. Panel supp. pf. at 2-3.

54. From a cost-efficiency perspective, the Alternative Configuration is inferior to the proposed Project because it would likely entail additional expenditures for (1) land acquisition; (2) possible condemnation proceedings; and (3) moving and replanting the existing berm. Panel supp. pf. at 5.

55. The Alternative Configuration could also require incurring the cost of upgrading the 34.5 kV network (i.e., an additional 115/34.5 kV transformer, bus, circuit breakers, and relay and control equipment) due to Williston area load growth that would be added to the 34.5 kV system by the alternative. Panel supp. pf. at 6.

56. The cost of the Alternative Configuration has not been calculated. It is estimated that these costs would be significant (e.g., the uninstalled cost of a comparable transformer is estimated at \$1.3 million). Panel supp. pf. at 6.

### **Demand Side Management Alternatives**

57. The benefits of the Project could not be achieved in a more cost-effective manner by energy efficiency, generation, conservation or other load management measures. Mallory pf. at 12-13; exh. VELCO-Mallory-10.

58. Savings from energy efficiency cannot reduce load fast enough, initially or against expected future load growth, to defer GMP's date of need. There are only 1.63 MW of potential cumulative energy efficiency savings after seven years compared to the required load reduction of 7.04 MW. Mallory pf. at 13; exh. VELCO-Mallory-10.

59. As for VEC's need to replace its Williston Substation, energy efficiency would not be a viable alternative because a reduction in electrical demand would not eliminate the need to replace the function of the existing VEC Williston substation to serve its 1,011 customers. Mallory pf. at 13; exh. VELCO-Mallory-10.

60. Although generation could produce savings by deferring GMP's need for five years, the expected savings are not substantial (approximately \$810,000). Mallory pf. at 13-14.

61. Neither distributed generation nor a reduction in electrical demand would eliminate the need to replace the function of the existing VEC Williston substation. Mallory pf. at 13-14; exh. VELCO-Mallory-10.

62. Load management is not an equivalent alternative to meet the current needs of either GMP or VEC. The load-control analysis conducted in conjunction with the development of the Project shows that load control is not a practical alternative because (1) the projected frequency of control events (24 events over 60 days) would likely lead to customer fatigue and therefore

insufficient participation in the load-control program; (2) the amount of load that would need to be enrolled in the program (7% of peak load) is greater than the maximum load-control potential that is generally available; (3) the duration of the load-control events (8.0 hours maximum/4.3 hours on average) would be too long for the commercial and retail customer-base to be served in the Area of Need. Mallory pf. at 14; exh. VELCO-Mallory-10 at 4.

**Discussion:**

In this proceeding, the Petitioners are seeking approval to upgrade VELCO's Tafts Corners Substation and to remove VEC's existing Williston substation. The Project's primary purpose is to increase the reliability of service, thereby reducing the risk of future outages in a region of Vermont that is densely settled and commercially developed, and that has been designated as a future growth area in the State.<sup>3</sup>

Before the Board may approve the proposed Project, Section 248(b)(2) requires that it must find that the proposed Project:

is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost effective manner through energy conservation programs and measures and energy-efficiency and load management measures, including but not limited to those developed pursuant to the provisions of sections 209(d), 218c, and 218(b) of this title.

The Board has developed a three-part test in order to judge compliance with § 248(b)(2)<sup>4</sup> :

- (1) What is the need for present and future demand for service?
- (2) Is the proposed Project required to meet that need?
- (3) Is it probable that the need could be met more cost-effectively through other alternatives?

The evidence in this case has persuaded me that this Project is needed and provides the best means of meeting the future energy demand for the area of need. The Project represents an

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3. See *infra* finding #70.

4. Docket 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*, Order of 1/28/05 at 8.

incremental upgrade to an existing VELCO substation in order to address the present and future energy infrastructure needs of GMP and VEC by (1) providing additional load-serving capacity to the distribution system in the area of need via a new transformer connected to the 115 kV transmission system with new 12.47 kV circuits, (2) reducing the loads on the 34.5 kV Digital Substation transformer, and (3) allowing VEC to replace and remove its aged Williston substation and serve its customers more reliably, without having to build a new substation.

While there are alternatives to the Project, such as serving the area's load at its present and future levels by expanding other nearby substations,<sup>5</sup> these alternatives are inferior. They would be located at a greater distance from the load center, thus incurring higher electrical losses and the need for significant additional distribution infrastructure (i.e., new express distribution feeder lines).<sup>6</sup> These alternatives also would likely require new, separate distribution utility facilities on green field sites, and would likely be built in contravention of local land-use planning goals.<sup>7</sup>

Apart from considering separate construction alternatives, the Petitioners were asked by Board staff in this docket to examine the Alternative Configuration for construction within the Substation. This option represented yet another solution for meeting the present and future demand for the area of need. The Alternative Configuration would have entailed substituting a 34.5/12.47 kV transformer for the Project's proposed 115/12.47 kV transformer, thereby supplying load from the 34.5 kV network instead of the 115 kV network. The Alternative Configuration proved to be an inferior option as well, chiefly because it would not yield any reliability gains and would neither relieve existing congestion nor avert future congestion on the 34.5 kV network.<sup>8</sup>

In contrast to all of the alternatives discussed above, the proposed Project represents a good example of integrated planning: it enhances reliability while building on existing infrastructure, enjoys municipal support, and is designed to minimize aesthetic and environmental

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5. Cecchini pf. at 3-4; Abendroth supp. pf. at 2-3.

6. Cecchini pf. at 3-4; exh. Green Mountain Power-Cecchini-2; tr. 11/21/08 at 34 (Cecchini). For VEC, participating in the Project will reduce its present line losses. By constructing replacement facilities for the Williston substation within the Tafts Corners Substation, VEC expects to realize annual savings of \$12,000. Abendroth supp. pf. at 3.

7. Tr. 11/21/08 at 20 (Mallory/Abendroth/Cecchini).

8. Panel supp. pf. at 2-3; tr. 11/21/08 at 17 (Mallory).

impacts.<sup>9</sup> In this case, these benefits of integrated planning can only be realized by implementing the Project as proposed by the Petitioners.<sup>10</sup> Therefore, I conclude that the Project is required to meet the present and future demand for the area of need.

With respect to the cost-effectiveness of the Project, I have concluded that the present and future demand for service in the Area of Need probably could not be met more cost-effectively through other alternatives. The Project cost estimate is \$9.3 million, a sum that is significantly lower than the estimated \$15 million aggregate cost for implementing separate alternative solutions for VEC (\$7 million) and GMP (\$8 million). Furthermore, these separate solutions reflect no evident prospect of gains in energy conservation, efficiency or load management.

The Project cost also compares favorably with the cost of pursuing the Alternative Configuration. While no fixed dollar cost estimate was developed for the Alternative Configuration in this proceeding, the Petitioners did present persuasive evidence showing that a decision to forego the Project in favor of pursuing the Alternative Configuration likely would result in (1) delays to conduct an appropriate systems impact study (six months alone), as well as engineering design work, and a review of potential land-use impacts, and (2) costs for additional equipment and an expansion of the Substation footprint. By comparison, the Project requires none of these measures. I therefore agree with Petitioners that the Alternative Configuration is likely to "significantly increase the total project costs over the life of the substation with no reliability gains and thus would be less likely to meet the requirements of 30 V.S.A. § 218c."<sup>11</sup>

In sum, based on the above findings, I conclude that the construction of the proposed Project is the most cost-effective means of meeting the current and future demand for service in the area of need. No other options that were reviewed in this case, including generation, energy

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9. Panel supp. pf. at 7; tr. 11/21/08 at 22 (Abendroth).

10. I also note the economic waste that would follow from not implementing the Project as the solution for addressing the need identified in this docket. VELCO has saved costs by constructing the existing substation to a scale sufficient to accommodate the upgrade contemplated by this Project and an additional, planned future upgrade. Tr. 11/21/08 at 33 (Mallory). VELCO also saved additional costs by installing foundations for the Project during the initial construction of the substation that was authorized by the Board in Docket 6839. Tr. 11/21/08 at 29-30 (Mallory). VELCO estimates it saved 25-30% in reduced labor hours and approximately \$50,000 in avoided contractor mobilization and demobilization charges. Panel supp. pf. at 10.

11. Panel supp. pf. at 6.

efficiency, and load-response measures, can meet the expected need for service with an appropriate level of reliability. The integrated solution proposed by Petitioners is the least-cost means of effectively addressing the problem of forecasted Williston area load using existing infrastructure, with municipal support and the least aesthetic and environmental impact.

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**System Stability and Reliability**

[30 V.S.A. § 248(b)(3)]

63. The Project will not have an adverse impact on system stability or reliability. This finding is supported by findings 64 through 66, below.

64. ISO-NE has issued a letter concluding that the Project would have no adverse impact upon the bulk power system for New England and therefore authorizing VELCO to proceed with construction of the Project. Mallory pf. at 9.

65. In its 2006 Vermont Transmission System 10-Year Long-Range Plan Analysis, VELCO has determined that the Project would not have an adverse impact on VELCO's transmission system. Mallory pf. at 8-9.

66. The Project will improve system reliability by reducing the loading on the Tafts Corners and Essex substation 115/34.5 kV transformers. The Project will reduce the loading on these transformers by transferring the load from the 34.5 kV system to the 115/12.5 kV transformer proposed at Tafts Corners. Additionally, the Project will reduce the loading on the 34.5 kV Digital Substation Transformer. Mallory pf. at 8-9.

**Economic Benefit to the State**

[30 V.S.A. §248(b)(4)]

67. The Project will result in an economic benefit to the State and its residents. This finding is supported by findings 68 through 71, below.

68. The Project creates economic and safety benefits for the citizens of Vermont because it will address pressing reliability needs. By improving the reliability of the Chittenden County electrical system, the Project will avoid the costs and safety problems associated with power outages. Mallory pf. at 18.

69. The CCRP notes that Chittenden County has the largest concentration of people and employers in Vermont. Critical businesses and institutions depend on reliable electric service in this area, such as major shopping centers, major shipping vendors, hotels, traffic lights, and State Police facilities in the immediate vicinity. Mallory pf. at 18.

70. The Project's Area of Need includes the site of Tafts Corner in Williston, which in 2007 was designated as Vermont's first State Growth Center. This designation enhances Williston's ability to attract dense commercial and residential growth. The Project will support an anticipated level of economic growth in the service area and will provide reliable electric service to meet the pressing capacity needs of the system in this area. Mallory pf. at 18-19; exh. VELCO-Mallory-13.

71. The Project also will produce energy savings by reducing line losses. By serving the load from the expanded Tafts Corners Substation, VEC will experience a reduction in system line losses of approximately 20 kW at peak load conditions. This is equivalent to an annual energy savings of 140,000 kw-hr, which is worth \$12,000 annually at a power supply cost of \$0.085 per kw-hr. Exh. VELCO-Mallory-10, Table 5; Abendroth supp. at 3.

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

[30 V.S.A. § 248(b)(5)]

72. The Project will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety. This finding is supported by findings 73 through 128, below, which address the criteria specified in 10 V.S.A. §§ 1424a(d) and 6086(a)(1) through (8), 8(A) and (9)(K).

**Outstanding Resource Waters**

[10 V.S.A. § 1424a(d)]

73. There are no outstanding resource waters adjacent to the substation location, nor will any be associated with this Project. In addition, no sediment from the minor earth disturbing activities resulting from this installation will leave the site. Mallory pf. at 20; exh. VELCO-Mallory-15.

**Water and Air Pollution**

[10 V.S.A. §6086(a)(1)]

74. The Project will not result in undue water or air pollution. This finding is supported by findings 75 through 77, below.

75. VELCO performed an analysis of the environmental impact of the upgrades which concluded there would be none. Mallory pf. at 21; exh. VELCO-Mallory-15.

76. The installation and operation of the proposed upgrades will not unduly impact air quality. The Project will create minimal, short-term impacts during construction from use of diesel- and gasoline-powered trucks. Operating the substation will not produce air emissions. Mallory pf. at 21-22; exh. VELCO-Mallory-15.

77. The Project will not result in undue water pollution. The construction work will take place within the existing substation fence, and the Petitioners do not anticipate any discharges from the construction work or operation of the proposed upgrades that could potentially cause any water pollution. Mallory pf. at 22; exh. VELCO-Mallory-15.

**Headwaters**

[10 V.S.A. § 6086(a)(1)(A)]

78. The Project is not located in headwaters of the state. Mallory pf. at 22-23.

**Waste Disposal**

[10 V.S.A. §6086(a)(1)(B)]

79. The Project does not involve disposal of wastes, and therefore will not involve the injection of waste materials or any harmful or toxic substances into ground water or wells. The Petitioners will dispose of construction debris in a state-approved landfill. The Project will not result in increases in stormwater flow and will not require a stormwater permit. Mallory pf. at 23; exh. VELCO-Mallory-15.

**Water Conservation**

[10 V.S.A. § 6086(a)(1)(C)]

80. Because the Project will not require any new use of any municipal water supplies during or after construction, no water conservation methods are necessary. Mallory pf. at 23; exh. VELCO-Mallory-15.

**Floodways**

[10 V.S.A. § 6086(a)(1)(D)]

81. The Project is not located within a 100-year flood boundary or floodplain. Mallory pf. at 23; exh. VELCO-Mallory-15.

**Streams**

[10 V.S.A. § 6086(a)(1)(E)]

82. There are no streams located in the Project's vicinity. Mallory pf. at 24; exh. VELCO-Mallory-15.

**Shorelines**

[10 V.S.A. §6086(a)(1)(F)]

83. There are no shorelines near the Project. Mallory pf. at 24; exh. VELCO-Mallory-15.

**Wetlands**

[10 V.S.A. § 6086(a)(1)(G)]

84. No wetlands, regulated or otherwise, are located in the substation proper, nor will the proposed Project construction impact any wetlands. Mallory pf. at 24; exh. VELCO-Mallory-15.

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**Sufficiency of Water and Burden on Existing Water Supply**

[10 V.S.A. §6086(a)(2) and (3)]

85. The Project will not require any changes to the existing municipal water supply, so there will no burden on existing water supplies. Mallory pf. at 24; exh. VELCO-Mallory-15.

**Soil Erosion**

[10 V.S.A. § 6086(a)(4)]

86. The Project will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water. This finding is supported by findings 87 through 91, below.

87. Many of the footings required for the Project were installed during the initial substation construction. Only minor earth work will be required for the footings, the VEC conduit modifications, and installation of the oil-containment vessel for the new transformer. All of these

activities will be performed within the confines of the existing fence line, and thus will not cause soil erosion. The Project will not require tree clearing, but will require minimal earth disturbance. Petitioners do not anticipate using dust control, but if necessary, Petitioners will control dust by applying water or calcium chloride on disturbed areas. Mallory pf. at 25; exh. VELCO-Mallory-15.

88. VEC's distribution upgrade will not cause an undue adverse impact on the natural environment, because it involves limited construction work within existing rights of way. Abendroth pf. at 8.

89. Any earth disturbance outside the Tafts Corners substation will be limited to placing new poles where needed and traversing the right-of-way to access existing poles for line construction. Abendroth pf. at 7.

90. The underground cable installation within the Tafts Corners substation fence will utilize some of the conduits installed during initial construction. Earth disturbance inside the substation fence will be limited to installing new conduit between an existing vault and the steel transition structure. Abendroth pf. at 7.

91. Neither GMP's distribution upgrade, nor the placement of new underground circuits located entirely under previously-disturbed land, will cause any unreasonable soil erosion or reduce the ability of the land on which it will be built to hold water. Cecchini pf. at 5-6.

### **Traffic**

[10 V.S.A. § 6086(a)(5)]

92. The Project will not cause unreasonable congestion or unsafe conditions with respect to any affected means of transportation. This finding is supported by findings 93 and 94, below.

93. Petitioners expect no long-term traffic impacts from the Project and only minor short-term traffic impacts due to deliveries of Project equipment to the substation site during the construction period. Such deliveries will use existing roads with vehicles that are commonly used on such public roads. Petitioners will coordinate with the property manager of Maple Tree Place, Inc. to safely move any item that requires an oversized truck to the job site. Mallory pf. at 25-26.

94. There will be a limited impact on traffic on Interstate 89 when VEC installs its distribution line. As GMP did on VEC's behalf when the 34.5 kV line was installed over the

highway, VEC will seek a road-crossing permit from the Agency of Transportation. This impact will be temporary and for a limited period of time. Abendroth pf. at 7.

**Educational Services**

[10 V.S.A. § 6086(a)(6)]

95. The Project will not have any impact on educational services. Mallory pf. at 26.

**Municipal Services**

[10 V.S.A. § 6086(a)(7)]

96. The Project will not have any impact on municipal services. Mallory pf. at 26.

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

[10 V.S.A. § 6086(a)(8)]

97. The Project will not result in any undue adverse effects on rare and irreplaceable natural areas. Mallory pf. at 26; exh. VELCO-Mallory-15.

98. This Project will not have an undue adverse effect on historic sites. In conjunction with the original construction of the Tafts Corners Substation, it was determined that there are no historic sites at the Substation location. Mallory pf. at 19-20.

99. The Project will not have an impact upon below-ground historic sites because all affected work areas have previously been disturbed. Mallory pf. at 19-20.

100. Petitioners will install Project components within the Substation, which is fenced-in. No additional lighting is proposed as part of the Project. Mallory pf. at 19.

101. The Project will allow for removal of two existing take-off pole structures that presently are adjacent to the south side of the Substation and are visible from Interstate 89. Mallory pf. at 20; exh. VELCO-Mallory-14 , Photo 3; exh. VELCO-Boyle-2 at 5; exh. VELCO-Boyle-4.

102. The Project also includes installing a new take-off structure and 30' transitional pole within the Substation yard. This design will improve the view for Interstate 89 motorists by lowering the visible structure heights to a level that is sufficiently screened, moving the structures farther away from their view, and creating a more ordered arrangement of the 34.5 kV and 12.47 kV circuits exiting the south side of the substation. Mallory pf. at 20; Boyle pf. at 3-4.

103. The Project calls for the addition of a cross arm to the existing 34.5 kV H-frame structure south of the substation. This will be an incremental change that cannot be visually mitigated. The additional proposed cross arm visually is in context with the function and appearance of the Substation. Abendroth pf. at 6; exh. VELCO-Boyle-4 at 2.

104. The present aesthetic mitigation at the Substation consists of vegetation (i.e., a berm and plantings) that screens the existing equipment that rises no more than 30' above the Substation floor. Most of the additional proposed Project equipment will remain at or below this level. Boyle supp. pf. at 3; exh. VELCO-Mallory-2.

105. VELCO plans to replace six trees and to conduct some maintenance of the existing vegetation surrounding the Substation. Boyle supp. pf. at 7; exh. VELCO-Boyle-5.

106. Two of the trees that VELCO plans to replace are visible from the Interstate 89 off-ramp on the north-bound side of the interstate. Tr. 11/21/08 at 106 (Boyle).

107. VELCO plans to fertilize the soil at the Substation in order to invigorate the existing vegetation. Tr. 11/21/08 at 108 (Boyle).

108. VELCO plans to prune the hardwoods at the Substation in order to remove dead wood, which will produce replacement vegetation. Tr. 11/21/08 at 109 (Boyle).

109. The interior of the Substation becomes more visible while traveling up the rise of the Interstate 89 off-ramp on the north-bound side – less so during leaf-on conditions, but more so during the six-month leaf-off period of the year. Tr. 11/20/08 at 87-91 (Boyle); exh. VELCO-Mallory-14 at L3.

110. The Project could have an adverse aesthetic impact because it will increase the mass of what is visible within the Substation. Tr. 11/20/08 at 87 and 91 (Boyle).

111. One option for additional mitigation aesthetic impacts is to move the existing vegetation screen on the berm toward Interstate 89 to a lower elevation, which would allow the vegetation to grow higher, thereby providing additional screening without running afoul of line clearance restrictions. Tr. 11/20/08 at 99-100 (Boyle).

**Discussion:**

Based on the findings detailed above, and subject to the condition noted below, I find that the Project will not have an undue adverse effect on the aesthetics or scenic and natural beauty of the area. In reaching this conclusion, I have relied on the Environmental Board's Quechee analysis for determining whether the aesthetic impacts of the proposed Project will have an "undue" adverse effect.<sup>12</sup>

The Petitioners maintain that the Project will have no adverse aesthetic impact, and therefore does not warrant any additional aesthetic mitigation measures for the Tafts Corners Substation site.<sup>13</sup> No additional plantings are recommended for the eastern side of the Substation that is visible when traveling north on Interstate 89. According to VELCO witness Boyle, any additional plantings would be masked from views from the east by the intervening old field succession that in some instances is eclipsing the existing VELCO plantings.<sup>14</sup> Additionally, Mr. Boyle contends this vegetation is protected in the 150-foot Conservation and Open Space District in the Williston Zoning Ordinance that extends north from the interstate fence.<sup>15</sup>

Unlike the Petitioners, I conclude the evidentiary record shows that the Project could have an adverse aesthetic impact because it will introduce new mass on to the Substation floor. Witness Boyle maintains that a substation "is not a very solid thing" and that it consists of "lattice work and small scale structures . . ."<sup>16</sup> While it may be accurate to describe this mass as lattice work and small-scale structures, there is no dispute that the Project will increase the mass of the lattice work and small-scale structures that is visible within the Substation.<sup>17</sup> Witness Boyle maintains that this mass will be completely obscured by the existing vegetation from the north-

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12. Docket 6860, Order of 1/28/05 at 79-80 (describing and discussing Quechee standard and analysis).

13. Boyle supp. pf. at 5.

14. Boyle supp. pf. at 7.

15. *Id.*

16. Tr. 11/20/08 at 88 (Boyle).

17. Tr. 11/20/08 at 87 and 91 (Boyle).

bound Interstate 89 off-ramp.<sup>18</sup> But Witness Boyle also recognizes that the interior of the Substation becomes more visible while traveling up the rise of the Interstate 89 off-ramp on the north-bound side – less so during leaf-on conditions, but more so during the six-month leaf-off period of the year.<sup>19</sup>

There is nothing in the evidentiary record of this case indicating that the Project will offend a clear written community standard intended to preserve the aesthetics or scenic beauty of the Project area. Nor does the record indicate that the Project would offend the sensibilities of the average person because it is out of character with its surroundings or significantly diminishes the scenic qualities of the Project area. However, the evidentiary record does establish that Petitioners may have failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the Project with its surroundings. Witness Boyle acknowledges that it may make sense to move the Substation's existing vegetation screen now planted on the berm toward Interstate 89 to a lower elevation, which would allow the existing vegetation to grow higher, thereby providing additional screening without running afoul of line clearance restrictions.<sup>20</sup>

Thus, notwithstanding Witness Boyle's testimony, I conclude that the Project may indeed warrant additional mitigation measures, with the need for such additional measures more readily determined after construction of the Project. Consequently, I recommend that the Board include a condition in the certificate of public good that states that the Board may require VELCO to install additional mitigation measures for this Substation if they appear warranted after viewing the completed Project. I further recommend that the Board include a condition that requires VELCO to execute the plant replacement and vegetation maintenance measures described by Witness Boyle in exh. VELCO-Boyle-5. With these conditions, I conclude that the Project will not have an undue adverse effect upon the aesthetics or scenic and natural beauty of the area.

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18. Boyle supp. pf. at 4; exh. VELCO-Boyle-2.

19. Tr. 11/20/08 at 87-91 (Boyle); exh. VELCO-Mallory-14 at L-3.

20. Tr. 11/20/08 at 99-100 (Boyle).

**Necessary Wildlife Habitat and Endangered Species**

[10 V.S.A. §6086(a)(8)(A)]

112. This Project will not result in any undue adverse effects on endangered species or necessary wildlife habitat. There are no natural areas or endangered species present in the substation. Mallory pf. at 26; exh. VELCO-Mallory-15.

**Public Health and Safety**

[30 V.S.A. § 248(b)(5)]

113. The Project will not have any adverse effects on the health, safety, or welfare of the public or adjoining landowners. The Project is an expansion of facilities within the existing substation fence, and will be designed in accordance with the National Electric Safety Code requirements. The overall footprint of the substation, as observed at the fence line, will not increase. The Petitioners will use high-quality materials and adhere to prudent utility construction practices throughout the construction phase. The Project will not unnecessarily or unreasonably endanger the public or adjoining landowners. Mallory pf. at 27.

114. The Project will not result in undue adverse noise pollution. Resource Systems Group, Inc. ("RSG") conducted sound-level monitoring at the Tafts Corners Substation to determine the sound power levels for the existing transformer. The monitoring indicated that interstate and local traffic noise and aircraft flight path noise dominate the background sound levels in the area. Hourly average background sound pressure levels were as low as 40 dBA at night and were typically between 50 and 58 dBA during the day. Mallory pf. at 22; exh. VELCO-Mallory-16.

115. RSG also modeled the existing and proposed conditions. With the proposed additional transformer, the substation sound levels perceptible to the nearest residential-type area are modeled to be between 26 and 31 dBA, which are below the existing background levels noted above. The nearest residential-type area, a hotel, is located more than 700 feet from the substation. Mallory pf. at 22; exh. VELCO-Mallory-16.

**Development Affecting Public Investments**

[10 V.S.A. §6086(a)(9)(K)]

116. The Project will not interfere with the public's use or enjoyment of, or access to such resources. Mallory pf. at 26-27.

**Consistency with Resource Selection/Integrated Resource Plan**

[30 V.S.A. §248(b)(6)]

117. VELCO does not have an Integrated Resource Plan ("IRP"), but the Project is consistent with VELCO's 2006 Vermont Transmission System 10-Year Long-Range Plan Analysis. ("VELCO Plan"). The VELCO Plan assumes that the Project's upgrade of the distribution transformer is in place as part of the base case in determining the impacts of other projects on the Vermont transmission system and in assessing the future needs of the bulk power system and the subtransmission system in the area. Mallory pf. at 27-28; tr. 11/20/08 at 48 (Mallory).

118. VELCO presented and discussed Project information with the Vermont System Planning Committee on March 11, 2008. Mallory pf. at 14-15.

119. GMP's approved 2007 IRP emphasizes the company's goal of providing reliable electric service: "GMP focuses a significant amount of our planning, engineering and construction activities on increasing the reliability of our system." Cecchini pf. at 4.

120. The Project is consistent with GMP's approved 2007 IRP because it will allow GMP to continue to provide reliable service for the Tafts Corners area and to keep pace with the future demands of the increasing load in that area. The Project will increase reliability by fortifying the system's ability to back-up load in the event of a circuit failure during peak usage times. Cecchini pf. at 4; tr. 11/20/08 at 68-69 (Cecchini).

121. VEC's most recently approved 2004 IRP specifically notes VEC's plans to participate in the Project and the possible decommissioning of the present Williston Substation. Abendroth pf. at 4-5.

122. Assuming the successful implementation of the Project, VEC will retire the Williston Substation. Tr. 11/20/08 at 72 (Abendroth).

123. The replacement of VEC's Williston Substation is necessary in order for VEC to provide reliable electric service. Tr. 11/20/08 at 70 (Abendroth).

124. The Project is consistent with VEC's approved 2004 IRP. Findings 121-123, above.

**Compliance With Twenty Year Electric Plan**

[30 V.S.A. §248(b)(7)]

125. The Project complies with the Department of Public Service's 2005 Vermont Electric Plan (the "Plan"). This finding is supported by findings 126 through 129, below.

126. The Vermont Electric Plan sets forth several basic objectives that must be satisfied in serving the public interest. When utilities design and implement long-range resource plans, the Plan requires them to strive to meet Vermont's electric energy needs in a manner that is "efficient, adequate, reliable, secure, sustainable, affordable, safe, and environmentally sound, while encouraging the state's economic vitality and maintaining consistency with other state policies." Utilities must "carefully balance[]" these objectives. The Project strikes the proper balance among each of these objectives. Mallory pf. at 28.

127. The Petitioners designed the Project to ensure that sufficient energy supply can reach an area of need in Vermont where there are high concentrations of residences and businesses. The Project will minimize outages due to transmission or distribution system failures by providing additional capacity to GMP's transmission and distribution systems. Mallory pf. at 29.

128. The Project also allows VEC to replace its Williston Substation. The Project does this in an efficient and environmentally sound manner as an integrated least-cost solution within an existing site instead of two separate construction projects located in different areas. Mallory pf. at 29.

129. On November 21, 2008, the Department filed a letter with the Board stating that the proposed Project is consistent with the Vermont Twenty-Year Electric Plan, in accordance with 30 V.S.A. § 202(f). Letter from Sarah Hofmann, Esq., to Mrs. Susan M. Hudson, dated November 21, 2008.

**Outstanding Resource Waters**

[30 V.S.A. § 248(b)(8)]

130. There are no outstanding resource waters adjacent to the substation location, nor will any be associated with this Project. In addition, no sediment from the minor earth disturbing activities resulting from this installation will leave the site. Mallory pf. at 20; exh. VELCO-Mallory-15.

**Waste to Energy**

[30 V.S.A. §248(b)(9)]

131. This criterion does not apply to this Project.

**Existing Transmission Facilities**

[30 V.S.A. §248(b)(10)]

132. Existing or planned transmission facilities can serve the Project without creating an undue adverse effect on Vermont utilities or customers. This finding is supported by findings 133 through 135, below.

133. The existing transmission system can support the Project without requiring additional transmission upgrades. Mallory pf. at 29-30.

134. The Petitioners are prepared to implement the Project in time to meet the current and expected electrical system needs of the greater Williston area. Mallory pf. at 29-30.

135. The Project will not have an undue adverse effect on VEC and GMP's utility workers. Engineers from VELCO, VEC, and GMP have discussed the resulting shifts of load from the 34.5 kV system to the 115 kV system and will continue to discuss protection-system settings related to the Project as these settings are designed. The Project will serve distribution circuits that are generally operated on a radial basis and do not have the potential to create unintended current flows that could be a danger. Additionally, the Petitioners will discuss equipment outages and operational control of Project facilities during and after construction throughout the ongoing regularly scheduled weekly operational meetings that representatives for all of the Petitioners attend. This inter-company communication and understanding of the

electrical systems will aid in avoiding accidents that could impact a utility or its workers. Mallory pf. at 29-30.

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### **III. CONCLUSION**

Based upon all of the above evidence, I conclude that the Project:

- (a) will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, and the recommendations of the municipal legislative bodies;
- (b) is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and land management measures;
- (c) will not adversely affect system stability and reliability;
- (d) will result in an economic benefit to the state and its residents;
- (e) will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and §§ 6086(a)(1) through (8) and (9)(K);
- (f) is consistent with the principles of least-cost integrated resource planning;
- (g) is in compliance with the electric energy plan approved by the Department under 30 V.S.A. § 202;
- (h) does not involve a facility affecting or located on any segment of the waters of the State that has been designated as outstanding resource waters by the Water Resources Board;
- (i) does not involve a waste-to-energy facility; and
- (j) can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.

To the extent these findings are inconsistent with any proposed findings, such proposed findings are denied.

Pursuant to 3 V.S.A. § 811, a proposal for decision has been served on the parties to this case.

I have reviewed the comments on the Proposal for Decision ("PFD") that were filed on December 31, 2008, and I agree with the recommended changes. Since the revisions to my PFD are not adverse to any party, I am not recirculating the PFD.

Dated at Montpelier, Vermont, this 5<sup>th</sup> day of January, 2009.

s/June E. Tierney  
June E. Tierney, Esq.  
Hearing Officer

#### **IV. BOARD DISCUSSION**

We adopt in full the Hearing Officer's proposed findings and conclusions. We further emphasize the aesthetic mitigation this project will yield due to the removal of VEC's Williston Substation.<sup>21</sup> To ensure that the benefit of this aesthetic mitigation is fully realized, we will require VEC to promptly remove its Williston substation upon completion of the Project approved in this Order today. Accordingly, no later than 30 days after the Project facilities are placed into service and VEC's Williston substation is removed from service, VEC shall file with the Board for review and approval a plan for removal of the VEC Williston substation. Finally, we note VEC's intent to install a mobile substation connection in the vicinity of the LeClair switch for VELCO's use in future transmission-line maintenance activities.<sup>22</sup> Our approval of this Project will include a condition requiring the prompt removal of any mobile substation that is temporarily installed at these connection facilities upon completion of the maintenance activities for which the mobile unit is being used.

#### **V. ORDER**

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that:

1. The findings, conclusions, and recommendations of the Hearing Officer are adopted.
2. The proposed upgrades and the removal of Vermont Electric Cooperative, Inc.'s ("VEC") Williston Substation, in accordance with the evidence and plans submitted in this proceeding, will promote the general good of the State of Vermont in accordance with 30 V.S.A. § 248, and a certificate of public good to that effect shall be issued to allow such construction.
3. Vermont Electric Power Company, Inc. ("VELCO") shall execute the plant replacement and vegetation maintenance measures set forth in exh. VELCO-Boyle-5.
4. Within 30 days of the completion of construction of the Project, VELCO shall arrange a site visit with the Public Service Board ("Board") and all parties to review whether there is a need to install additional aesthetic mitigation measures for the Tafts Corners Substation ("Substation")

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21. See findings #6, #10, and #121, above.

22. See finding #18, above.

due to construction of the Project. Based on this inspection, the Board expressly reserves the right, after notice and opportunity for an evidentiary hearing, to require the installation of additional aesthetic mitigation measures for this Substation if it deems them to be warranted.

5. Within 30 days after the project facilities are placed into service and VEC's Williston Substation is removed from service, VEC shall file with the Board for review and approval a plan for the removal of the VEC Williston Substation.

6. All construction activities shall be in compliance with the Agency of Natural Resources' Low Risk Site Handbook for Soil Erosion Prevention and Sediment Control.

7. Any mobile substation unit installed at VEC's connection site in the vicinity of the LeClair switch shall be removed promptly upon completion of the maintenance activities triggering the deployment of the mobile substation unit.

Dated at Montpelier, Vermont, this 7<sup>th</sup> day of January, 2009.

<u>s/James Volz</u>	)	
	)	PUBLIC SERVICE
	)	
<u>s/David C. Coen</u>	)	BOARD
	)	
	)	OF VERMONT
<u>s/John D. Burke</u>	)	

OFFICE OF THE CLERK

FILED: January 7, 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.*