

STATE OF VERMONT
PUBLIC SERVICE BOARD

PSB Docket No. 7628

Joint Petition of Green Mountain Power Corporation,
Vermont Electric Cooperative, Inc., and Vermont
Electric Power Company, Inc. for a Certificate of
Public Good pursuant to 30 V.S.A. Section 248 to
Construct up to a 63 MW Wind Electric Generation
Facility and associated Facilities on Lowell Mountain
In Lowell, Vermont and the Installation of approximately
16.9 miles of Transmission Line and associated
Substations in Lowell, Westfield, and Jay, Vermont.

SURREBUTTAL TESTIMONY OF SHANNON MORRISON

SUMMARY OF TESTIMONY

Ms. Morrison is a wetlands ecologist for the Water Quality Division, Department of Environmental Conservation, Vermont Agency of Natural Resources. The purpose of Ms. Morrison's testimony is to update her direct testimony to address proposed changes in the project and to respond to Green Mountain Power witness Nelson.

1 **Q1. Please state your name, place of employment and your position.**

2 A1. Shannon Morrison, District Wetlands Ecologist, Water Quality Division, Department of
3 Environmental Conservation, Vermont Agency of Natural Resources.

4 **Q2. Did you previously file testimony in this proceeding?**

5 A2. Yes.

6 **Q3. What is the purpose of your testimony?**

7 A3. I respond to the rebuttal testimony of Green Mountain Power witness Nelson and provide
8 ANR's opinion on Petitioner's proposed mitigation for the project's effect on wetlands.

9 **Q4. Has your answer to Question 19 in your previous testimony, concerning impacts on
10 wetlands and buffers, changed since your previous testimony?**

11 A4. Not substantively, however, the Petitioner has submitted more detail on the proposed
12 impacts to the wetlands and buffer zones for the project.

13 **Q5. Do you agree with the Petitioner's characterization of the impacts?**

14 A5. Yes.

15 **Q6. Do you agree with Mr. Nelson's statement in response to Rebuttal Question 22 that
16 the proposed conservation of land on the Moose Mountain Forestry, LLC parcel
17 (Exh. Pet.-Jan-12) "would more than amply compensate" for the wetland impacts
18 associated with the Project?**

19 A6. I believe Mr. Nelson was referring to the mitigation ratio of wetlands conserved
20 compared to wetlands impacted. The mitigation ratio is tied to acreage, but I do not
21 believe the Moose Mountain Forestry parcel adequately conserves the type of wetland
22 being impacted by the Wind Farm component at the ridgeline. The mitigation package
23 does not include the permanent conservation of these types of wetlands. Conservation

1 may be an appropriate way of mitigating impacts when the functions and values of the
2 wetlands being conserved are the same as those being impacted.

3 **Q7. Please describe how the functions and values of the wetlands located on the Wind**
4 **Farm component of the Project compare to the functions and values of the wetlands**
5 **contained on the Moose Mountain parcel.**

6 A7. The Moose Mountain Forestry parcel wetlands consist of a large beaver influenced
7 wetland complex and wetlands associated with permanent and intermittent drainage on
8 the mountain. The wetlands associated with the Moose Mountain Forestry parcel
9 provide wildlife habitat for wetland dependent species such as beaver, amphibians and
10 waterfowl, as well as for deer, moose and bear. They do not, however, provide the same
11 groundwater recharge/discharge function as the wetlands located in the higher elevations
12 along the ridgeline. The wetlands along the ridgeline act as functional headwaters, and
13 are a critical transition between groundwater and surface water. Headwater wetlands
14 moderate water temperature and contribute organic matter to the stream, both of which
15 are critical to stream biota. Impacts that occur at the beginning of a stream can affect
16 water quality and aquatic biota downstream. In addition to about 8,000 square feet of
17 direct impacts to functionally headwater wetlands at or near the ridgeline, impacts from
18 clearing, grading and other construction within close proximity to these types of wetlands
19 can have indirect effects on their function and value. The project will also cross a
20 number of streams and drainageways along the ridgeline. The cumulative effects of these
21 impacts should be offset by appropriate mitigation.

22 **Q8. Why is it important to mitigate impacts to the specific functions and values of the**
23 **ridgeline wetlands described in your response to Question 7?**

1 A8. As I indicated in my answer to Q7, the impacted wetlands act as functional headwaters
2 and as such are critical to water quality. It is possible to start to lose function in an
3 ecosystem if features performing desirable functions are consistently altered and not
4 compensated for. A good example is floodplain type wetlands that were converted to
5 agricultural use in the last 100 years. The loss of this wetland type has resulted in a net
6 impact of reduced flood control, increased erosion, and impaired water quality.
7 Appropriate compensation is not to conserve or restore wetlands in other areas of the
8 landscape, but along floodplains. Similarly, the impacts to functions and values that the
9 high elevation wetlands provide along and near the ridgeline cannot be adequately
10 compensated through conservation of wetlands in mid elevation beaver complexes on the
11 Moose Mountain Forestry parcel.

12 **Q9. Do you have a recommendation for how Petitioner can achieve the objective of**
13 **mitigating the loss of the functions and values associated with the high elevation**
14 **wetlands?**

15 A9. The Petitioner's mitigation proposal should include a mechanism for conserving higher
16 elevation wetlands.

17 **Q10. Does this conclude your testimony?**

18 A10. Yes.