

1 THE STATE OF NEW HAMPSHIRE
2 BEFORE THE
3 NEW HAMPSHIRE
4 SITE EVALUATION COMMITTEE

5
6 DOCKET NO. 2008-
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8 APPLICATION OF GRANITE RELIABLE POWER, LLC
9 FOR CERTIFICATE OF SITE AND FACILITY
10 FOR GRANITE RELIABLE POWER WINDPARK
11 IN COOS COUNTY
12

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14 TESTIMONY OF RAYMOND LOBDELL
15 ON BEHALF OF
16 GRANITE RELIABLE POWER, LLC

17 July 2008
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20 Qualifications
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22 Q. Please state your name and business address.

23 A. My name is Raymond Lobdell. My business address is Lobdell

24 Associates Inc., 88 Gale Chandler Road, Landaff, New Hampshire, 03585

25 Q. Who is your current employer and what position do you hold?

26 A. I am employed by Lobdell Associates Inc. In my present position I am

27 president of the company and sole owner.

28 Q. What are your background and qualifications?

29 A. I have more than 30 years of experience in the soil and wetland science

30 fields including environmental assessment, permitting, and monitoring on energy related

31 projects. Prior to forming Lobdell Associates, I held several positions, including wetland

32 scientist with consulting firms, soil conservationist with the U.S. Department of

33 Agriculture, hazard mitigation specialist with the Federal Emergency Management

1 Agency (reservist), and environmental planner with two regional planning commissions.
2 I hold a master's degree in soils and hydrology from the University of New Hampshire
3 and a bachelor's degree in biology from the University of Vermont. I am also an adjunct
4 professor of environmental science at Plymouth State University. I am a certified soil
5 scientist and certified wetland scientist in New Hampshire.

6 **Purpose of Testimony and Overview of the Project**

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Q. What is the purpose of your testimony?

9 A. The purpose of my testimony is to address Granite Reliable Power, LLC's
10 ("GRP") wind power project in Coos County ("the Project"), including mapping and
11 inventorying natural resources, and assessing environmental impacts, particularly with
12 respect to wetlands.

13 **Q. Are you familiar with the Project that is the subject of this**
14 **Application?**

15 A. Yes, I am. In my role as a consultant I have been involved in the planning
16 for this Project and have visited the site numerous times including initial visits to assess
17 wetland impacts at proposed turbine locations. Additionally I am coordinating wetland
18 delineation for the Project that is being done by a team of NH certified wetland scientists,
19 assessing wetland impacts, developing wetland mitigation strategies, and planning
20 mitigation monitoring.

21 **Q. Please describe the design of this Project.**

22 A. The Project consists of the construction of 33 wind turbines, each with a
23 capacity of three megawatts. The turbines will be located on three strings atop ridgelines
24 in the Phillips Brook watershed, identified as Dixville Peak, Owlhead Mountain, Mount

1 Kelsey, and Fishbrook Ridge. The Project will include the use of approximately 19 miles
2 of existing logging roads and the construction of approximately 12 miles of new road to
3 access the turbine sites.

4 **Wetlands Impacts**

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6 **Q. Please describe what consideration has been given to wetlands issues.**

7 A. Avoiding wetland impacts has been a priority from the beginning of this
8 Project. The wetlands in the Project area have been delineated by certified wetland
9 scientists and surveyed onto Project plans. The location of the turbines on ridge lines
10 minimizes impacts to significant perennial streams, and open and forested floodplain
11 wetland complexes located in the valleys. Design and construction techniques will be
12 utilized that will minimize wetland impacts by impacting wetlands previously impacted
13 by logging whenever possible. This includes utilizing existing logging roads and skidder
14 trails. Additionally, new access roads will be laid out to avoid wetlands and cross
15 wetlands at their narrowest points whenever feasible. Erosion control will be important
16 during construction to minimize sediment entering nearby wetland sites.

17 Several meetings have been held with state and federal regulatory and
18 resource agencies to discuss wetland issues, the most recent being a site visit on July 1,
19 2008 with representatives from the New Hampshire Department of Environmental
20 Services (“NHDES”) Wetlands Bureau and the U.S. Army Corps of Engineers
21 (“USACE”) to view wetland delineation methodologies and visit possible wetland impact
22 and restoration areas.

23 Wetlands have been delineated at the proposed turbine sites, laydown area,
24 substation area, switchyard area, and along the existing and proposed roadways that will

1 be used to construct and maintain the Project. Wetlands were delineated in the fall of
2 2007 and the spring of 2008 by a team of N.H. certified wetland scientists in accordance
3 with NHDES and USACE wetland delineation standards found in the report “Corps of
4 Engineers Wetlands Delineation Manual, 1987”. Wetlands were also classified according
5 the U.S. Fish and Wildlife Service wetland classification system found in the report
6 “Classification of Wetlands and Deepwater Habitats of the United States by Cowardin,
7 1979”. A vernal pool inventory, which includes identification of potential vernal pools
8 and a discussion of pool types and characteristics, was also completed. Additionally,
9 wetland functions and values have been assessed and plans developed to mitigate any
10 impacts.

11 More specific information about the Project’s impacts on wetlands is
12 contained in the wetlands permit application submitted as Appendix 2 to the Application.

13 **Q. Have you studied the impact this Project will have on wetlands?**

14 A. Yes, we have studied the impact the Project will have on wetlands and will
15 continue to do so. Now that the wetlands have been delineated and classified, we have
16 developed and will continue to develop strategies to avoid wetland impacts whenever
17 possible. Whenever impacts are unavoidable, they will be minimized and mitigated.

18 **Q. Please describe your study.**

19 A. The study underway has several components including: 1. mapping and
20 delineating wetlands; 2. classifying wetlands and vernal pools; 3. preparing an evaluation
21 of wetland functions and values; 4. assessing wetland impacts, avoiding proposed
22 wetland impacts where possible; and 5. mitigating unavoidable wetland impacts.

23 **Q. Please explain the initial results of your study.**

1 A. The wetlands in the Project area are dominated by Palustrine forested
2 wetlands, seasonal intermittent streams and small perennial streams. Many of the
3 wetlands to be impacted are on sloping basal glacial till or bedrock landscapes with low
4 vegetative interspersion. A qualitative assessment of 13 wetland functions and values in
5 the Project area has been completed using a method developed by the New England
6 Corps of Engineers detailed in a report entitled "The Highway Methodology Workbook
7 Supplement" (COE, 1999). Based on this assessment, important wetland functions and
8 values include wildlife habitat and sediment retention. I do not address overall wildlife
9 impacts; those will be addressed by Stantec Consulting. Historically, the wetlands in the
10 Project area have been impacted by logging, including the construction of haul roads and
11 log yards, and log skidder operations.

12 **Q. What steps will Granite Reliable Power, LLC take to mitigate the**
13 **impact of the Project on wetlands?**

14 A. The location of the turbines on ridge lines minimizes impacts to
15 significant perennial streams, and open and forested floodplain wetland complexes
16 located in the valleys. Design and construction techniques will be utilized that will
17 minimize wetland impacts by impacting wetlands previously impacted by logging
18 whenever possible. This includes utilizing existing logging roads and skidder trails.
19 Additionally, new access roads will be laid out to avoid wetlands and cross wetlands at
20 their narrowest points whenever feasible. At some locations where existing roadways
21 cross wetland areas, the culverts were evaluated for replacement with larger culverts or
22 bridges to create more favorable conditions for biota to access habitat on both sides of the
23 roadway. Wetland impacts will be avoided whenever possible and minimized by

1 reducing the width of access roads to the minimum required for safety and by locating
2 towers and other structures out of wetlands. Alternative layouts and locations for towers
3 and other structures have been investigated in order to determine sites having fewer
4 wetland impacts. Erosion control efforts will be undertaken during construction to
5 minimize sediment entering nearby wetland sites.

6 **Q. Please describe the mitigation assessment plan that has been**
7 **prepared.**

8 A. Since compensatory mitigation will be required for this Project, a
9 mitigation assessment plan has been prepared. Several mitigation alternatives have been
10 explored, including wetland restoration, wetland creation and upland buffer protection.
11 The plan includes a wetland restoration component which will include replacement of a
12 number of existing culverts on logging roads with open bottom culverts and bridges and
13 restoration of stream channels. While additional wetland restoration opportunities exist,
14 such as removing existing logging yards and logging wetland crossings, they were
15 rejected because the surrounding land will remain in commercial forestry use and the
16 existing yards, logging roads, and skidder trails will be needed in the future for on-going
17 forest management and logging operations.

18 The major component of the proposed compensatory mitigation plan
19 involves upland buffer protection. The upland buffer protection area proposed is a
20 contiguous parcel of land in the headwaters of the Phillips Brook watershed,
21 approximately 660 acres in size and identified as an important subwatershed area of the
22 Upper Ammonoosuc River. The proposed mitigation area is located in the northwestern
23 portion of the site in the unincorporated area of Ervings Location and the town of

1 Columbia. The area is at a high elevation (up to 2600 feet in elevation) and it buffers and
2 includes important wetland complexes and portions of order 1 tributaries of Phillips
3 Brook. Additionally, the area abuts the existing 39,000 acre Nash Stream Forest owned
4 by the State of New Hampshire. The area is also identified as having important wildlife
5 habitat according to the N.H. Fish and Game Department Wildlife Action Plan. A
6 conservation easement will be placed on the entire parcel.

7 In my opinion, the proposed mitigation plan will substantially exceed state
8 and federal minimum mitigation requirements and more than adequately compensate for
9 unavoidable wetland impacts.

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11 **Q. In your opinion will this Project have an unreasonable adverse effect**
12 **on the environment, more particularly wetlands?**

13 A. The Project will not have unreasonable adverse effect on wetlands.
14 Wetland impacts will be minimized by siting turbines and infrastructures out of wetlands
15 whenever possible, utilizing existing logging roads for access during construction and
16 operation of turbines whenever possible, constructing any new access roads to avoid
17 wetland impacts, and mitigating unavoidable wetland impacts in a manner that meets or
18 exceeds all state or federal minimum standards.

19 **Q. Are there any other comments you would like to make at this time?**

20 A. No.

21 **Q. Does this conclude your prefiled testimony?**

22 A. Yes.

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