

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

Docket No. _____

Petition of UPC Vermont Wind, LLC for a Certificate)
of Public Good pursuant to 30 V.S.A. section 248,)
authorizing it to construct a 52 MW wind electric generation)
facility, and associated transmission and interconnection)
facilities, in Sheffield and Sutton, Vermont, and operate)
the same.)

**PETITION FOR A CERTIFICATE OF PUBLIC GOOD
PURSUANT TO 30 V.S.A. § 248(a)**

NOW COMES UPC Vermont Wind, LLC (“UPC”) and files this Petition requesting the Public Service Board (“Board”) to issue a Certificate of Public Good (“CPG”) pursuant to 30 V.S.A. § 248(a) authorizing UPC to construct and operate a 52 megawatt (MW) wind electric generation facility, and associated transmission and interconnection facilities, in the towns of Sheffield and Sutton, Vermont (the “Project” or “Sheffield Wind Farm”).

By this Petition, but without limiting itself hereto, UPC represents as follows:

PROJECT OVERVIEW

1. The project consists of the construction and operation of a 52 MW wind generation project to be located in the towns of Sheffield and Sutton, in Caledonia County, Vermont. The Project is expected to utilize 26 wind turbines, with a nameplate capacity of 2 MW each. The turbine layout would run along two parallel ridges in Sheffield and Sutton -- Hardscrabble Mountain (the so-called “southern array”), and a second ridgeline that runs from Granby Mountain to Norris Mountain (the “northern array”). The

current locations show 20 turbines in Sheffield and 6 in Sutton. The elevation of the ridges varies between 1,970 feet and 2,540 feet.

Description of UPC

2. UPC is a Delaware limited liability company. Its principal offices are located at 100 Wells Avenue, Suite 201, Newton, MA 02459.
3. UPC is certified to do business and is in good standing in the State of Vermont.
4. UPC is a company as defined by 30 V.S.A. § 201.
5. UPC has submitted a self-certification for the project seeking QF status under federal law (PURPA) from the Federal Energy Regulatory Commission. UPC meets all of the requirements under PSB Rule 4.100.

Sale of Power

6. UPC's goal is to sell all the electrical energy generated by the Project to Vermont utilities. UPC is under agreement to sell the Washington Electric Cooperative (WEC) 2 MW of Project capacity, and WEC has an option to take an additional 2 MW. In addition, UPC is currently in discussions with other Vermont utilities, and has entered into an MOU with the Vermont Electric Cooperative (VEC) which describes the parties' intentions to enter into a long-term power sales agreement.

Wind Resource and Energy Production

7. The Project has a comprehensive, long-term wind resource data collection history. Three meteorological stations in the project area have been collecting data for several years, and UPC has also gathered eight years of long-term wind data from a reference anemometer on Burke Mountain, located approximately twelve (12) miles from the site.

8. Based upon the estimation of wind speed, and accounting for blade icing/fouling, cold temperature shutdown, turbine availability, array losses, high wind factors, electrical losses, and a margin for uncertainty, the expected net energy production of the Project will be 147,600 MWh on average (depending on the ultimate turbine model selected and number of turbines actually sited). The Project's annual energy production will be equivalent to the energy demands of approximately 19,000 homes.

Project Lands

9. UPC Vermont Wind has entered into agreements with several landowners, covering approximately 3,000 acres in the project area, which allow the company to: erect and operate the wind turbines and associated equipment; access the ridgelines from town roads and logging roads/trails; construct electrical collection lines from the turbines to central collection point near VELCO's existing St. Johnsbury to Irasburg 115 kV transmission line; and construct a substation and related electrical interconnection facilities to electrically connect to that VELCO line.
10. The vast majority of the project lands that UPC Vermont Wind has under agreement have previously been utilized for timber harvesting.

Wind Turbines and Related Equipment

11. The Project anticipates using Gamesa G87 wind turbine generators (or a similar unit produced by Gamesa or a different manufacturer), with 87 meter diameter rotors on 78 meter towers. The wind turbines will be sited a minimum of about 3 rotor diameters apart, or approximately 860 feet. The wind turbines begin generating energy at wind speeds as low as 9 mph and produce full power at wind speeds above 33 mph. The rotor speed varies between 10 and 20 revolutions per minute, depending on wind speed.

12. Each wind turbine is comprised of three components: the tower, the nacelle, and the rotor blades. The turbines will use a tubular steel tower, which at its widest dimension will be approximately 16 feet in diameter. Tower heights will be up to approximately 257 feet. The towers are conical tubular steel and will be painted white or light grey. The towers will be brought to the site in sections, and then mounted on a reinforced concrete foundation. The concrete foundation will be approximately 18 feet in diameter.
13. The tower is topped by a nacelle, which houses the main mechanical components of the turbine. The nacelle is approximately 12 feet high and 24-30 feet long, and connects with the rotor hub. The interior of the towers can be accessed in order to maintain turbine components in the nacelle.
14. The rotor consists of three fiberglass blades up to approximately 140 feet in length, resulting in a maximum turbine height of 398.6 feet (with the blade tip in the vertical position). The rotor blades are made of carbon fiber reinforced fiberglass and have a black coating in order to minimize winter ice on the blades.
15. Each turbine will have an associated step up transformer to increase the nominal generated voltage of 575 V to 34.5 kV. For each Gamesa machine anticipated for this project, this transformer is a dry-type, mounted in the rear of the nacelle.
16. Additional maintenance equipment will be located in a small (6,000 square foot, single story) equipment building somewhere on UPC-controlled property, and an electrical substation and related equipment will be located near the interconnection with the VELCO transmission line.

17. The three existing meteorological towers that were part of the site evaluation will be removed. In their place, two temporary (2-4 months) and two permanent meteorological towers will be constructed. The new meteorological towers will be of guyed lattice construction, with a triangular cross-section approximately 18 inches across. The top of the towers will be at nacelle elevation (78 meters or 256 feet).
18. Lighting standards of the Federal Aviation Administration (FAA) apply, as the turbines are over 200 feet in height. The FAA's draft revised guidelines specify that the turbines at the end of a ridgeline string and those approximately one-half mile apart within the string should be lit at night with one red blinking light atop the nacelles. No white or daytime strobe lights would be required. The FAA has issued Determinations of No Hazard for the Project, recommending that 15 of the 26 turbines be lit. UPC will continue to work with the FAA to further minimize turbine lighting to the greatest extent possible while at the same time ensuring air traffic safety.

Transmission Facilities

19. A 34.5 kV electrical gathering system will be built to deliver the energy from the turbine arrays to a substation to be built adjacent to VELCO's 115 kV line, approximately 2-3 miles away. The gathering system will be underground between the turbines and above ground along the Project's access road. Energy will be stepped-up from 587 Volts at the turbines to 34.5 kV for facility power collection and distribution system, and from 34.5 kV to 115 kV at the interconnection point with the VELCO system (a new substation adjacent to the VELCO line). All interconnection and operating standards of PSB Rule 4.106 will be met.

Construction

20. Site development will require the upgrade of existing roads and construction of a roadway system between the turbine sites, clearing of a work area for each turbine, installation of turbine foundations, erection of the turbines, burial of the underground power gathering system, construction of 34.5 kV transmission lines, and construction of the substation at the point of interconnection with the existing power transmission line. Each of these features will be designed and constructed in a manner to avoid and minimize impacts to existing natural areas, and to best fit the Project features into the existing contours of the landscape.
21. A key element in minimizing impacts will be to make use of the extensive existing network of woods roads that currently provide access to several points along the ridgeline. The existing roads will be upgraded to accommodate construction equipment and delivery of turbine components, and the new road system will be located on or close to the alignment of the existing road network to the maximum extent practicable.
22. During construction, turbine tower sections and other turbine parts require secure lay down areas in reasonable proximity to the construction sites. A workspace area of approximately 1.1 acres around the base of each turbine will be cleared of vegetation during construction. A smaller portion of this area around each turbine will be required for maintenance. Once construction and installation are completed, these lay down areas will be revegetated.
23. Existing vegetation cover reflects a variety of land management and timber harvesting activities: vegetative cover includes active and recently cut areas, early successional forest, mid-successional second growth and mature second growth. In total,

construction of the Project is expected to require clearing of approximately 119 acres of vegetated cover, including clearing for improvement and construction of the turbine sites (including transformer pads and laydown/blade assembly areas), access roads, underground power collection lines and transmission lines, and the substation. Of this total, approximately 104 acres (87%) of clearing will be temporary (during construction), and will be allowed to revegetate after construction is complete. Roughly 14 acres will be permanently cleared for new access roads, power collection lines, the substation, and a small area (0.20 acres) associated with each turbine. The permanent cleared area represents 0.5% of the total leased area.

24. The Project will be built over one construction season during 2007. Many of the construction materials needed for road building and for turbine foundations will be sourced locally. UPC Vermont Wind expects to employ 50 to 75 people during construction, with the majority of the workers who are involved in road, foundation, and electrical line construction coming from local labor pools.

Transport of Equipment

25. Transportation of turbine components to the site during construction will be by specialized overland trucks. All such oversized and over dimensional loads will travel under permits issued by the Vermont Agency of Transportation (VTAOT). The routes to the project site will involve exiting the north bound lane of Interstate 91 and utilizing the local road network as much as practical to the northern and southern array. The transport route will not travel through Sheffield village, due to height limitations of the Berry Hill Road underpass at I-91.

26. Public roadways that UPC anticipates utilizing provide sufficient width that two-way traffic may be accommodated even with the largest dimensional loads. Modifications to existing roadways appear to be limited to potential work at the Interstate 91 off ramp, placing steel plating over some existing culverts to ensure their structural stability, and resurfacing of the Kivimae Road section of Hardscrabble Mountain Road.

Operation and Maintenance

27. The Project will directly employ 3-5 permanent employees on-site to provide maintenance of the individual wind turbines, transmission facilities, and site improvements (roads, gates, fences, etc.) on a routine basis. A centralized Supervisory Control and Data Acquisition (SCADA) system will monitor the condition of the wind plant equipment, alert service technicians to any fault or alarm conditions, record and sort data, and allow remote control of the turbines.
28. In general, with the exception of the fenced areas immediately surrounding the Project substation and operations facility, landowners will continue to manage their lands and make decisions regarding access to their lands by the general public. In the unlikely event that ice accumulation on the turbine blades would pose an unacceptable safety risk (icing events of this magnitude would generally cause an automatic shutdown of the turbines), UPC may implement additional warnings and restrictions to access in the area immediately surrounding the wind turbines.
29. The Project will be operated year-round over its useful efficient life, which is expected to be at least 20 years. At the end of its useful efficient life, the facility will either be re-powered with more efficient turbines (subject to then-applicable regulatory approvals) or decommissioned. Decommissioning would be funded according to a plan filed and

approved with the Board. A reserve account is expected to be created to cover the estimated expenses of decommissioning.

Consultations with State Agencies, Municipalities, and Others

30. UPC has had ongoing discussions with both ANR and the DPS since 2004, seeking their input on the nature and scope of pre-application investigations and sharing the preliminary results of that work. UPC has met with their staffs and conducted field visits with ANR biologists and DPS staff members. In addition, UPC met with DPS staff, and conducted field visits with DPS staff and members of the public, during met tower permitting, and has met with DPS staff on several occasions over the last two years to keep them updated on the project.

31. Informal consultation with ANR began in July 2004 and has included regular correspondence with staff including wildlife biologists specializing in birds, bats, and bears; wetland regulatory staff; staff specializing in water resources, stormwater, erosion control, and air quality; and planning and legal staff. On-site meetings were held in May and June, 2005, and additional meetings were held at the ANR's Waterbury and Barre offices in November 2005 (two meetings) and January 2006. UPC is continuing to dialog with ANR staff concerning the description of the site's existing wildlife and other natural resources, assessment of the project's potential impacts on these resources, and opportunities to avoid, minimize or otherwise mitigate for impacts that may occur.

32. UPC has consulted and communicated with the Town of Sheffield about the project many times, beginning in 2002, including meetings with the Selectboard, Planning Commission and also presentations to the public. UPC has met with the Town of Sutton Selectboard on several occasions, commencing in the winter of 2004, to convey

information about the project and identify concerns. UPC has also had several meetings with the Northeast Vermont Development Association (NVDA) since 2003. In the summer of 2005 UPC sponsored a bus tour to the Searsburg wind farm, which was attended by approximately 20 residents of Sheffield and Sutton. In October 2005 UPC sent notice of the Project to abutting landowners, the Towns of Sheffield and Sutton, and all the surrounding towns within a 10-mile radius of the Project. The notice included an invitation to contact UPC for more information and to schedule additional meetings if a municipality desired. Only the Town of Westmore contacted UPC, and though a meeting was requested, scheduling conflicted with the then-impending holidays. Westmore opted to inform interested residents to attend a public presentation to the Sutton Selectboard in December 2005, instead.

SECTION 248 CRITERIA

33. As provided in more detail below, the proposed project meets the criteria established by 30 V.S.A. § 248(b), and hence warrants the Board making the findings requisite to the issuance of a Certificate of Public Good.

30 V.S.A. § 248(b)(1) – Orderly Development of the Region

34. The Project “will not unduly interfere with the orderly development of the region,” and will not cause any direct impacts on the capacity of the region to develop.
35. The Project will not cause an undue burden on public roadways, or other types of municipal or state services or infrastructure. It will not utilize land or resources that are otherwise needed or planned for other forms of development within the region. The

Project will result in the permanent development of only approximately 14 acres of land, principally for roads, out of more than three thousands of acres of surrounding land that is principally devoted to forestry. The Project will improve access for continued forest management on the surrounding properties, and will provide additional income to the landowners, thus making it easier for them to keep the land in forest management and to continue applying sustainable forest management practices.

36. The Sheffield and Sutton Selectboards and Planning Commissions and the Northeastern Vermont Development Association (NVDA) were provided prior notice of this Petition and plans for construction of the Project by letter dated October 6, 2005, pursuant to 30 V.S.A. § 248(f). All towns within a ten mile radius of the Project were provided copies of the notice as well. To date, UPC has received no formal written response or recommendations from the Sheffield Selectboard, the Sheffield Planning Commission, the Sutton Selectboard, the NVDA, or any of the so-called ten mile towns.
37. The Town of Sheffield conducted an officially-noticed Town Meeting on December 1, 2005, at which time residents voted on whether they supported UPC's proposed project. Town voters supported the Project by a margin of 120-93.
38. The Sutton Planning Commission filed a letter with the Public Service Board in which it recommended disapproval of the Project because in the Planning Commission's view the Project does not comply with the Sutton Town Plan. The testimony and other evidence provided by UPC in support of this Petition regarding economic, environmental, noise, visual, and other issues clearly demonstrate that the impacts from the Project will not be undue, and that all relevant and mandatory provisions of the Sutton Town Plan are met.
39. The NVDA has no Regional Plan that is currently in effect.

30 V.S.A. § 248(b)(2) – Need for the Project

40. 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...”
41. UPC is not a regulated distribution utility under Vermont law and is not required nor does it have the ability to deliver energy conservation programs and load management measures to Vermont electricity consumers.
42. The need for this Project is driven by several factors. First, Vermont is heavily reliant on out-of-state sources of power that are among the most expensive in the U.S., and are prone to disruption and price increases. Moreover, two-thirds of Vermont’s power is supplied by just two sources -- Hydro Quebec and Vermont Yankee – and these contracts will expire within the next decade. According to the 20-year electricity plan, one of the state’s major energy priorities is to “ensure that Vermont’s overall energy portfolio is sufficiently diverse, especially in light of the potential loss of major generating supplies.” At the same time, demand for electricity is increasing. Over the past fifteen years, electricity demand in Vermont has increased steadily at an annual rate of 1.5%, a trend which the 2005 Energy Plan anticipates will continue through 2020.
43. Act 61 establishes Vermont’s commitment to renewable energy generation, setting a goal of meeting statewide incremental load growth between January 1, 2005 and January 1, 2012 with renewable resources. Demand for Renewable Energy Credits (RECs) is also increasing regionally, as New England states develop and implement Renewable Portfolio Standards (RPS) to encourage renewable energy generation.

44. Energy efficiency and conservation programs alone are not sufficient to eliminate these needs. Such programs would not increase the diversity of the state or regional power supply, and they will not address the goals set by regional RPSs. And, as the 2005 energy plan points out, current energy efficiency programs and demand-side management techniques, while responsible for significant savings, are not sufficient to satisfy the expected growth in demand.
45. The need for this Project is confirmed by UPC's agreement to sell 2 MW of project output to WEC, with an option for an additional 2 MW, for a 20 year term. UPC has also entered into an MOU with VEC, under which the parties are negotiating a 20-year agreement for 28 MW, or 54% of the Project's capacity. Once this agreement is in place, the majority of the Project's capacity would be committed to local utilities.

30 V.S.A. § 248(b)(3) – System Stability and Reliability

46. The Project “will not adversely affect system stability and reliability.”
47. The Project will not adversely affect system stability and reliability. The wind turbines, transformers, and power lines will utilize a number of systems to isolate the Project from the power grid in the event of equipment failure within the Project including the ability to automatically shut off individual turbines or disconnect from the VELCO transmission line in the event of ground faults, phase faults, over-current, under and over voltage, under and over frequency, and system imbalance within the Project. In addition, the turbines have power electronics which provide soft-start capability to reduce starting surges, ride through short-term system voltage dips, and provide or consume reactive power to improve voltage regulation on the transmission system to

which the Project is interconnected. All interconnection and operating standards of PSB Rule 4.106 will be met.

48. UPC's consulting engineer has determined that the Project will not adversely affect system stability and reliability, either locally or regionally. ISO-New England is presently conducting studies to confirm these initial findings.

30 V.S.A. § 248(b)(4) – Economic Benefit to the State

49. The Project “will result in an economic benefit to the State and its residents” by providing jobs, taxes, lease payments, and other economic benefits to individuals and towns of the region along with the State of Vermont.
50. Construction and operation of the Project will result in the creation of more than 80 jobs in 2007 and 24 permanent new jobs in 2008 and beyond. About one-third of the initial employment gains and two-thirds of the new permanent jobs are expected to be in Caledonia County.
51. The total economic investment associated with this Project is expected to exceed \$90 million. Direct State and local property tax payments are expected to total more than \$750,000 per year, with additional local land lease payments of about \$300,000 per year.
52. This Project could generate more than \$1 million in State tax revenues during the construction and development phase, with ongoing State revenues totaling more than \$12.5 million over the 20 year initial life of the facility. The direct fiscal benefits to the Towns of Sheffield and Sutton are expected to exceed \$450 per resident per year in Sheffield, where 20 of the 26 turbines are to be located, and just under \$100 per resident per year in Sutton, where 6 of the 26 turbines are planned

53. The Project is a renewable energy project that will not produce air emissions from the generation of electricity. Energy production at this project will likely displace (avoid) higher cost power that is supplied by a fossil-fueled generation plant that does emit pollutants. The monetary value of the air emissions avoided by the proposed project is estimated to potentially exceed \$1.2 million per year.

30 V.S.A. § 248(b)(5) and (8) – Environmental Considerations

Outstanding Resource Waters

54. There are no Outstanding Resource Waters on the Project site or in any adjacent areas. To the extent they are relevant to the Project, the criteria enumerated in 10 V.S.A § 1424a(d) have been given due consideration and are addressed throughout the several environmental evaluations supporting this Petition.

No Undue Air Pollution

55. The Project will not “result in undue air pollution.”

56. The wind turbines will not generate any air pollutants. Based on the typical energy mix of the ISO New England grid, the energy produced by this project will displace the equivalent energy from out-of-state fossil fuel-fired plants. To the extent that such plants are running less of the time, fewer air pollutants will be emitted and less pollution will migrate into Vermont and the region. Replacing the energy produced by the current average New England fuel supply with the proposed 52 MW wind facility will result in significant annual reductions in air emissions, including:

- Carbon Dioxide (greenhouse gases) = 171,653,400 lbs/year

- Sulfur Dioxide (acid rain precursor) = 345,800 lbs/year
- Nitrogen Dioxide (smog precursor) = 101,200 lbs/year

57. Fugitive dust emissions from earth disturbance during construction will be minimized through the implementation of site-specific plans by the general contractor.
58. There are no health-based federal or state noise regulations that apply to operation of the Project. Noise levels from the turbines will be minimal and will not pose any harm to human health or disturb the quality of life of nearby residents.

Public Health and Safety

59. The Project will not have any undue adverse affect on public health and safety. Analyses of potential icing and shadow flicker show that neither presents undue health or safety risks to the public.
60. During construction, the contractor will be responsible for controlling access to the site and for ensuring safe construction practices in compliance with OSHA standards. Operational and construction sound levels do not pose a risk to human health and safety. Public access to the substation will be prevented by chain link fenced in accordance with safety standards.

No Undue Water Pollution (incl. headwaters, waste disposal and soil erosion)

61. The Project will not “result in undue water pollution,” and will meet any applicable Department of Environmental Conservation regulations regarding water quality and waste disposal.
62. Construction of the Project will require coverage under the NPDES General Permit for Stormwater Runoff from Construction Sites. Operation of the Project will require

coverage under the State Stormwater Permit for New Development. Due to the advanced level of design and analysis required for permitting, these permits will be applied for during the final design stage of the Project. For the purposes of this filing, UPC's engineers have prepared preliminary engineering plans to demonstrate that the Project is fully capable of meeting or exceeding all of the technical standards required to obtain these permits.

63. The State of Vermont's Best Management Practices (BMPs) for stormwater management and erosion prevention and sediment control provide the basis for ensuring that the Project will meet all standards and that surface waters will be protected. Development of the full stormwater analysis and final EPSC will be completed as part of the final design process, once the engineering designs of all roads, laydown areas and other project features have been finalized.
64. Only one project turbine is located above 2500 feet in a Class A watershed. There are no identified surface waters within the area of this turbine. Given the very limited amount of clearing that will occur within this area (1 acre), no adverse impact to Class A waters is anticipated.

Waste Disposal

65. Excavated rock and organic debris will be disposed of on-site. Solid waste from the construction activities will be collected and disposed of off site at an approved landfill.
66. Solid waste disposal will be handled through private haulers, and will create no burden on local government. Stormwater management is discussed above. A septic disposal system will be designed and constructed to service the sanitary facilities at the

maintenance building that is described previously in this testimony. This leach field will not be receiving any flows except that generated via the sanitary facilities.

Water Conservation

67. Design of the Project “has considered water conservation, incorporates multiple use or recycling where technical and economically practical, utilizes the best available technology for such applications, and provides for continued efficient operation of these systems.”

68. Construction use of water will be primarily for earthwork compaction and dust control. This water will be brought on site by the contractor if sufficient quantities are not found to be available locally. During operation of the facility, only infrequent, small volumes of water are needed to maintain the wind turbines and other equipment – primarily for periodic cleaning. A water supply well will be installed at the maintenance shed described earlier in this testimony. This well will be used for domestic consumption and sanitary facilities at the maintenance shed and will likely supply the limited amount of water necessary for the on-going operation.

Floodways

69. The Project is not within a floodway or floodway fringe.

Streams

70. Any portion of the Project adjacent to the banks of a stream “will, whenever feasible, maintain the natural condition of the stream, and will not endanger the health, safety, or welfare of the public or of adjoining landowners.”

71. Impacts to streams in the Project area have been avoided and minimized to the greatest practicable extent through careful planning and layout of the Project’s access road

network. The Project's civil engineers have worked in an iterative fashion with environmental scientists to modify the road layout to avoid streams, and where stream crossings are unavoidable, to minimize the potential for adverse effects. As a result of this approach only five new stream crossings are proposed. All of these crossings occur at the uppermost reaches of the streams, but below the wetlands that serve as their sources. In this way, the widths of the crossings have been kept to a minimum, and the potential for direct runoff into the headwater wetlands has been avoided.

Shorelines

72. The Project is not located on or adjacent to a shoreline of any lake, pond, or river

Wetlands

73. The Project will comply with the Vermont Wetland Rules.

74. There is one Class II wetland, located near the King George Property within the Project footprint, but it will not be impacted by construction or operation of the Project. There are no Class I wetlands.

75. Impacts to Class 3 wetlands are proposed at just six (6) previously undisturbed wetlands within the 3000 acre project area. Individual impact locations range from 120 square feet to 11,680 square feet in area. An additional eleven (11) Class 3 wetlands will be impacted by the Project, but these wetlands have already been disturbed from prior human activity (e.g., existing road crossings). Construction and operation of the proposed wind farm Project will not have an undue adverse impact on the identified significant functions for these wetlands.

76. UPC has not yet initiated the U.S. Army Corp of Engineers' wetland permitting process due to continuing efforts to avoid all wetland impacts and due to the possibility of further redesign being necessary as a result of the 248 permit conditions.

Sufficiency of Water and Burden on Existing Water Supply

77. There is "sufficient water available for the reasonably foreseeable needs" of the Project.

78. The Project will not "cause an unreasonable burden on an existing water supply, if one is to be utilized."

79. Water for construction activities will be brought to the site. Water for operations will be provided by a water supply well installed at the maintenance shed.

80. Blasting is not anticipated to impact the water supply wells of nearby homes.

Soil Erosion

81. The Project will not "cause unreasonable soil erosion or a reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result."

82. UPC has prepared a conceptual Erosion Prevention and Sediment Control Plan, and will apply for coverage under the NPDES General Permit for Stormwater from Construction Sites, and the State Stormwater Permit for New Development. UPC's consulting engineers anticipate that all applicable state standards can be met.

Traffic

83. The Project will not "cause unreasonable congestion or unsafe conditions with respect to the use of the highways, waterways, railways, airports and airways, and other means of transportation existing or proposed."

84. All public roads can handle the expected volume of construction and post-construction traffic without creating congestion or unsafe conditions. The only changes anticipated

to the public roadways used for access to this Project (including portions of Berry Hill Road, Hardscrabble Road, Union Road, and Dareios Road) are the addition of temporary steel plating to ensure the stability of some culverts along the roads.

85. Adequate space for worker parking and construction vehicles is available on private land and/or private roads.
86. The FAA has issued Determinations of No Hazard for the Project, recommending that 15 of the 26 turbines be lit at night. UPC will continue to work with the FAA to further minimize turbine lighting to the greatest extent possible while at the same time ensuring air traffic safety.

Educational Services

87. The Project will not “cause an unreasonable burden on the ability of a municipality to provide educational services.”
88. The construction phase of the Project will occur over a roughly 10 month period during the 2007 winter and construction season(s). It is unlikely that temporary construction workers and their families would move to the area due to the Project. Once the Project is operational, 3-5 workers will be devoted to operation and maintenance. These workers may be hired from the existing local workforce.
89. UPC has notified the Towns of Sheffield and Sutton and the Caledonia North Supervisory Union of the Project. Responses received to date indicate that the Project should not create any unreasonable burdens.

Municipal Services

90. The Project will not “cause an unreasonable burden on the ability of the local governments to provide municipal or governmental services.”

91. The private roads accessing the site will not require municipal expenditures for maintenance.
92. The traffic associated with project operations (35 vehicle trips per week) will be minimal; thus additional maintenance of the town highways should not be necessary.
93. Waste disposal will be handled through private haulers, and will create no burden on local government.
94. UPC has notified the Towns of Sheffield and Sutton, the appropriate fire and rescue departments have been notified, and the Vermont State Police and the Caledonia County Sheriff's Office.

Aesthetics

95. The Project will not cause an undue adverse effect on aesthetics or the scenic or natural beauty of the area.
96. The noise analysis shows that the character of the sound from the wind farm would be consistent with or less than background levels at area residences, and inaudible at many locations. Under some conditions the turbine sound would be masked by the sound of the wind itself. UPC's noise consultant evaluated wind farm noise against guidelines established by the United States Environmental Protection Agency (EPA), and found that the Project would not exceed EPA guideline levels at any of the nearby residences.
97. The visual analysis shows that in light of the topography and extensive forest cover of the region, and the fact that many roads and villages are located in valleys, the visibility of the Project is remarkably low. The surrounding acreage, and the region in general, is a working landscape and has been one for a long period of time. These and other factors render the project's impacts on the aesthetics of the region remarkably small.

98. Under the so-called Quechee Analysis, the Project would not have an undue adverse impact because it does not violate a clear, written community standard intended to preserve scenic beauty, it would not be shocking or offensive to the average person (especially in light of clear evidence of widespread public acceptance of wind turbines in the landscape), and generally available mitigating steps have been taken to improve the harmony of the project with its surroundings.

Historic and Archaeological Sites

99. The Project will not cause an undue adverse effect on archaeological or historic sites. The Project site has low potential for archaeological remains, subject to one additional field inspection of the substation location that needs to be conducted in the Spring.

100. The Project site will not physically impact any state-listed or state-eligible historic structure. Nor will it have an undue adverse impact on historic structures based upon its visibility from such sites.

Rare and Irreplaceable Natural Areas

101. The Project will not cause an undue adverse effect on rare or irreplaceable natural areas. A unique natural wetland fen community occurs in the vicinity of the northern array, but outside the footprint of the Project. In addition, two limited areas of “rich northern hardwood forest” were noted in the vicinity, but outside the area of impact. No adverse impacts to these areas are anticipated.

Necessary Wildlife Habitat and Endangered Species

102. The Project will not “destroy or significantly imperil necessary wildlife habitat or endangered species.”

103. No federally-listed plants are known or likely to occur on the site. One state-listed endangered plant species (woodland cudweed) has been identified in the vicinity of the Project's southernmost turbine on Hardscrabble Mountain, and in response the proposed design has been modified to avoid any adverse impacts to this population.
104. UPC has evaluated the presence of wildlife in the project area through in-house and outside biologists. Field reviews were conducted, state records were reviewed, and appropriate state biologists were consulted.
105. The site provides habitat for a variety of terrestrial wildlife species that are common to the region. Development of the Project will alter the ways that some species (or individuals) use the site, and may lead to minor changes in some local populations. Overall, the species that currently use the area are well-adapted to the existing habitats as well as those that would evolve after construction, and there will not likely be any undue adverse impacts to rare, threatened or endangered species, wildlife habitats, or local or regional wildlife populations.
106. Installation of the turbines is not likely to present an undue risk of impacts for migrating birds and bats. Passage rates for daytime migrants (primarily raptors) are very low, indicating that the site is not a concentration area that would put large numbers of birds at risk of collision. Radar surveys of nocturnal migrants, which include most songbird species, confirmed that they pass over the site in both spring and fall in a broadfront pattern that is typical of this landscape. Numbers of migrants were similar to those documented elsewhere in the region, and only a small percentage was documented flying below turbine height.

107. Bat activity was documented to be quite low, and thus the site does not appear to pose a risk of a high incidence of bat collisions.
108. There will likely be a small but not ecologically significant risk of bird habitat disturbance stemming from construction activities and the post-construction presence of the wind turbines. The risk will be small because of the limited amount of clearing that will be required, and the tolerance of some bird species to the presence of wind turbines.

Development Affecting Public Investments

109. The Project will not unnecessarily or unreasonably endanger the public or quasi-public investment in public facilities, services, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to the public facility, service, or lands.
110. The Project area is not directly adjacent to any publicly-owned lands or facilities. With respect to any public lands or facilities from which the Project may be visible, it will not materially jeopardize the public's use or enjoyment of those lands.
111. The Project will not unreasonably impact any public roads, and UPC will bear the cost of any necessary improvements.
112. The Project's transmission line is being designed in consultation with VELCO to preserve the stability and reliability of its system.

30 V.S.A. § 248(b)(6) – Integrated Resource Planning

113. This criterion is not directly applicable to this Project. UPC is not a regulated distribution utility and thus is not required to submit for Board approval a least cost integrated plan. However, inasmuch as integrated resource planning is relevant to any Board determination under section 248, Vermont utilities who may purchase power

from this Project would each seek to diversify supply portfolios that include a mix of renewable and non-renewable energy.

30 V.S.A. § 248(b)(7) – Comprehensive Energy Plan

114. UPC has sent a letter to the Department requesting a determination of compliance under the Vermont Comprehensive Energy Plan that is currently in effect.

115. The overarching goal of the Plan is “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.” The proposed UPC Sheffield Wind Farm is consistent with this broad goal, and represents a commitment to the type of clean, reliable, affordable, and sustainable energy future envisioned in the Plan.

30 V.S.A. § 248(b)(10) – Transmission Facilities

116. The Project “can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.”

117. UPC will construct a 34.5 kV collector line that will run from the turbine arrays to a new substation, where it will interconnect with VELCO’s existing 115 kV line. UPC will pay all necessary costs to interconnect the project to the VELCO line, with no financial impact to Vermont ratepayers. In addition, UPC is paying for the necessary studies being conducted by ISO-New England to confirm that the project will not have an undue adverse affect on system stability and reliability.

118. One of the strong attributes of this Project is its close proximity to an existing transmission line, thus eliminating the need run any new transmission lines along public roads or other public rights-of-way.

PREFILED TESTIMONY AND EXHIBITS

In support of this Petition, UPC submits prefiled testimony and exhibits sponsored by the following witnesses:

Dave Cowan, Scott Rowland, and Steve Vavrik (as a panel)

Mssrs. Cowan, Rowland and Vavrik provide a detailed description of the wind generating project that UPC Vermont Wind is proposing to build and operate. They discuss the wind resources and siting of the Project, construction and operation, and the Project's compliance with the criteria of 30 V.S.A. § 248.

Thomas Kavet

Mr. Kavet discusses findings and conclusions drawn from analyses he performed with respect to the need for the Project and the likely economic benefits associated with the Project.

Avram Patt

Mr. Patt describes the agreement between UPC and WEC concerning the purchase of power from the Project, explains how this agreement and the Project is in the interests of WEC's members and ratepayers, and explains how the purchase of power from the Project is consistent with WEC's IRP.

Daniel Crockett

Mr. Crockett's testimony provides a description of the interconnection facilities, which include the electrical collection and the substation infrastructures, for the Project. He explains the alternatives considered and why the proposed design was selected, and studies that are presently being conducted by ISO-NE. He discusses why the Project will likely not have an adverse affect on system stability and reliability, and summarizes the benefits of the Project to the transmission network.

Christopher Bajdek

Mr. Bajdek describes the study conducted by HMMH regarding the potential noise impacts of the proposed Sheffield Wind Farm. The results of the study demonstrate that the Project will produce relatively low sound levels at the closest residences, and will not pose a threat to human health nor an undue adverse effect on aesthetics.

David Raphael

Mr. Raphael discusses his aesthetic assessment of the Project and includes an assessment of the visual impacts that may affect historic resources. He concludes

that the Project's aesthetic impact is not unduly adverse under the Quechee analysis and that the Project will not cause undue adverse impacts on historic resources.

Ralph Nelson

Mr. Nelson provides information on site design, stormwater, and soil erosion issues as they relate to the Project's compliance with the water pollution, waste disposal, soil erosion, water supply, and traffic criteria under section 248(b)(5).

Arthur Gilman

Mr. Gilman describes his investigations concerning wetlands, surface water bodies, rare and irreplaceable natural communities, and rare, threatened and endangered plant species. Mr. Gilman assesses the Project's potential impacts under Act 250 criterion 1(E), 1(G), 4, 8, and 8(A) with respect to those resources, and concludes that the Project will not have an undue adverse impact.

Robert Roy

Mr. Roy reviews the on-site studies regarding breeding and migrating birds, bats, and other wildlife (except large mammals) that have been conducted, and he provides an opinion on the potential impact of the Project on these wildlife species. He concludes that the project is not likely to have an undue adverse impact on wildlife species present at or near the project site.

Jeffrey Wallin

Mr. Wallin summarizes his evaluation of the impacts of the proposed on wildlife habitat for large mammals, including deer, moose, and bear. He concludes that the Project will not have an undue adverse impact on bears, moose, or deer.

NOTICE TO STATUTORY PARTIES

UPC has served this Petition, together with supporting prefiled testimony and exhibits, on the parties specified in 30 V.S.A. § 248(a)(4)(C), pursuant to the requirements of 30 V.S.A. § 248.

WHEREFORE, Petitioner respectfully requests this Board to:

- A. Hold a prehearing conference as expeditiously as possible to establish a schedule for testimony and hearings.
- B. Hold a technical hearing and make findings as required by 30 V.S.A. section 248.
- C. Find that the proposed Project will promote the general good of the State of Vermont and authorize Petitioner to undertake the actions herein and in the testimony and exhibits.
- D. Issue a Certificate of Public Good to that effect.
- E. Take such other actions as may be required for the expeditious review of this Petition.

DATED at Burlington, Vermont this 21st day of February 2006.

UPC Vermont Wind, LLC

By:

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