STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. _____

Petition of Deerfield Wind, LLC for a Certificate	)
of Public Good pursuant to 30 V.S.A. section 248,	)
authorizing it to construct up to a 45 MW wind electric generation	)
facility, and associated transmission and interconnection	)
facilities, in Searsburg and Readsboro, Vermont, and operate	)
the same.	)

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

NOW COMES Deerfield Wind, LLC ("Deerfield Wind") 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 Deerfield Wind to construct and operate up to a 45 MW wind electric generation facility, and associated transmission and interconnection facilities, in the towns of Searsburg and Readsboro, Vermont (the "Project").

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

I. Description of Petitioner

1. Deerfield Wind is a company as defined by 30 V.S.A. § 201, and as such is subject to the Board's jurisdiction pursuant to 30 V.S.A. § 203.
2. Deerfield Wind is a Delaware Limited Liability Company registered in Vermont with its principal address in North Palm Springs, California. Deerfield Wind's managing member is PPM Energy, Inc.
3. Deerfield Wind is certified to do business and is in good standing in the State of Vermont.
4. Deerfield Wind is owned by PPM Energy, Inc., a wholly owned subsidiary of Scottish Power–a Scottish company that provides electricity generation, transmission and distribution services in

the U.S. and U.K. PPM Energy, Inc. (www.PPMEnergy.com) develops, constructs, and operates wind energy projects throughout the United States. Headquartered in Portland, Oregon, PPM Energy is the second largest marketer of wind generated electricity and related renewable attributes in the United States.

II. Description of the Project

5. The Project will be comprised of between 15 and 24 wind turbines on approximately 80 acres in the Green Mountain National Forest (GMNF). Approximately half of the turbines will be placed on the east side of Route 8 on the same ridgeline as the existing GMP Searsburg facility ("Eastern Project Area"). The remaining turbines will be placed along the ridgeline to the west of Route 8 in a northwesterly orientation ("Western Project Area"). The Project will have a nameplate capacity of up to 45 MW, depending upon the turbine model selected and the number of turbines.

6. In 1997, Green Mountain Power Corporation (GMP) began operating the 11 turbine (6 MW) Searsburg Wind Facility on private lands adjacent to GMNF land. The Searsburg Wind Facility adjoins Deerfield Wind's proposed Eastern Project Area to its north, on private land. The proposed Project will upgrade and share the use of some of GMP's privately owned facilities.

A. Project Lands and Federal Jurisdiction

7. The vast majority of the Project's facilities and activities will occur on federal land in the Manchester District of the GMNF. The uses of federal land are subject to the Green Mountain National Forest Land and Resource Management Plan ("LRMP").

8. Deerfield Wind applied to the United States Forest Service (USFS) in November 2004 for a Special Use Authorization to utilize GMNF lands for this Project. The USFS is currently

reviewing the Project and is preparing an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA).

9. The USFS conducted an initial and second level screening of the Project and found that it met all relevant criteria specified in 36 C.F.R. 251.54, including:
    a. The Project is consistent with all applicable federal laws, regulations, orders and policies governing national forest lands.
    b. The Project is consistent with the GMNF Long Range Management Plan.
    c. The Project will not unreasonably interfere with authorized uses on adjacent federal lands;
    d. The Project will not pose any serious or substantial risk to public health or safety;
    e. The Project is in the public interest.
    f. Deerfield Wind is qualified and has the financial and technical capability to undertake the Project.
10. Deerfield Wind has secured all necessary property rights on the private lands to be used for the Project. The Project will use privately owned access roads, and transmission lines and potentially a substation that are part of GMP's existing Searsburg Project.

B. <u>Wind Resource and Energy Production</u>

11. More than two decades of wind data gathered in the site area provide confidence in the long-term average wind resource and the energy production estimates derived from it. The capacity of the Project will be up to 45 megawatts, depending on the size and number of turbines (1.5 to 3.0 MW each).
12. 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 long-term annual net energy production from the Deerfield facility is approximately 120,000 megawatt-hours (+/- 10%, depending on the number and type of turbines). The expected capacity factor is 0.35 (+/- 10%, again depending upon the turbines selected). The Project's annual energy production could thus meet the energy needs of roughly 14,000 to 16,000 average homes in Vermont.

C. Wind Turbines and Related Equipment

13. Each wind turbine is comprised of three components - the tower, the nacelle, and the rotor blades. The turbines use a tubular steel tower, approximately 260 feet in height and 16 feet in diameter at its base. The tower is topped by a nacelle, which houses the main mechanical components of the turbine. The rotor, mounted on the nacelle, consists of three fiberglass blades up to approximately 148 feet to the center of the hub. The total height of the turbines (highest arc of the rotor blades), depending upon the turbine model ultimately chosen, will be up to 125 meters (410 feet) above the turbine base.
14. The rotor blades are "pitched" (rotated along their axis) to enable them to operate efficiently at varying wind speeds. In addition, the rotors can spin at different (variable) speeds to allow the turbines to operate more efficiently at lower wind speeds.
15. The wind turbines begin generating energy at wind speeds as low as 9 mph and produce full power at wind speeds above 30 mph. The maximum rotor speed is approximately 20 revolutions per minute.
16. The turbine structures will be anchored to a concrete foundation. An area of the concrete foundation approximately 18 feet by 18 feet will be left exposed. The wind turbines will be sited a minimum of about 2.5 rotor diameters apart.
17. Each turbine will have an associated step up transformer.

18. Aircraft safety lighting will be specified by the Federal Aviation Administration (FAA). Current draft guidelines undergoing review at the FAA 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. For this Project, this would result in approximately 3 to 5 turbines being lit at each of the Eastern and Western Project Area, or 8 to 10 turbines being lit in the entire Project.

D. Transmission Facilities

19. Two possible sites have been identified for installing the transformers, switches, and other electrical interconnection equipment. Both sites are being further studied for their electrical suitability and other factors. The preferred option is to build a new substation in the extreme northern end of the Western Project Area (on GMNF land), adjacent to the existing 69 kV transmission line, in a cleared area in the forest. A second option is to use the existing Sleepy Hollow substation yard owned by GMP. The lengths and configuration of collection lines needed for both proposals are nearly the same. The two options will use essentially the same equipment internally, the highest components of which could reach to a height of approximately 10.7 meters (35 feet). In either case, the substation will be screened from public viewing places.
20. A new overhead and underground electrical collector system will be constructed, totaling approximately 5.75 miles in length for the Eastern and Western Project Areas. New electric collector cables will be constructed for the Western Project Area and the existing cable system for the Eastern Project Area will be extended. The collector cables will be underground beneath the access roads in the vicinity of the wind turbines and either underground or overhead along the remainder of the access roads.

E. Construction

21. New service roads will be needed for construction and operation. A total of approximately 5 miles of all-weather roads will be constructed to serve both the east and west sections of the Project. The roads will be graveled and hardened, and up to 38 feet wide for ridge roads and 24 feet wide for other access roads used during the construction period. The ridge roads will be allowed to grow back after construction until they are only 16 feet wide. The access road intersections and widest segments will be allowed to grow back to a width of 16 feet, and the rest of the access roads will be created and maintained at a width of 24 feet.
22. Land clearing and harvesting of trees will be done for the turbine installation and for the road construction described above. No more than 80 acres of National Forest land will be occupied for the installation of the wind turbines. Clearing will be done in linear strips, with small areas approximately one acre in size cleared out along the ridge-top portions of the roadways around the base of each individual turbine.
23. An operations and maintenance facility building will be constructed on a parcel of private land at the western end of Putnam Road. The building is anticipated to be approximately 100 square meters (1076 square feet) in size, of metal frame construction, and will need a well and waste disposal system. A storage yard of approximately three acres will be maintained adjacent to the building.
24. Workspace and temporary lay-down areas will be required for Project construction. Turbine tower sections and other turbine parts require secure lay-down areas in reasonable proximity to the construction sites. A workspace area approximately one-half to 2 acres around the base of each turbine will be temporarily cleared. Once construction and installation is completed, these

lay-down areas will be allowed to revegetate, with the exception of the small portion of these areas required for maintenance.

25. The Project will be built over an approximately nine-month construction period, with work occurring during the 2008 construction seasons.

26. Deerfield Wind will employ dozens of workers during construction. These temporary construction workers and their families are not anticipated to move to the area due to the Project.

F. Operation and Maintenance

27. The Project will operate for approximately 30 years. Operation and maintenance will be in accordance with a plan that will include a centralized Supervisory Control and Data Acquisition (SCADA) system to 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. Maintenance of the wind turbines, transmission facilities, and site improvements (roads, gates, fences, etc.) will generally be scheduled in two inspections at approximately six-month intervals and averaging 40 to 50 person hours per year for each turbine.

29. The Project will require 3 to 5 permanent staff for on-site operations.

30. Access to the Site will be controlled. Public access will be limited in accordance with the conditions established in the Special Use Authorization issued by the Forest Service and state permitting procedures. Access will be controlled with gates.

31. Through normal winter operation, the wind turbines and other structures will accumulate ice. Site technicians will follow proper safety procedures, developed by the O&M services provider based on experience and to reflect any applicable federal or state safety codes. No

instances of injury as a result of icing conditions have been reported at the Searsburg facility since it has been in operation.

G. Decommissioning

32. At the end of the Project's useful life or the loss of permission from the Forest Service to maintain the facility, decommissioning will occur. Decommissioning will be paid for out of a fund established by Deerfield Wind.

33. Decommissioning will include removing all buildings, structures, and other above ground equipment on federal and private land, with the exception of non-wind turbine components that landowners request remain in place (access roads, buildings, etc.). Turbine foundations, poles, and insulators will be removed to a minimum depth of 3 feet. At an appropriate interval prior to closure of the facility, a Removal and Reclamation Plan would be developed and approved by the USFS.

H. Sale of Power

34. The Deerfield Project intends to sell its electrical output and corresponding environmental attributes to wholesale customers on the New England power grid. These customers will include utility companies, power marketers or other service providers looking for a source of electricity produced by new renewable sources. PPM has entered into a letter of intent with Green Mountain Power for the purchase of up to 50% of the output from this Project. Other Vermont utilities have also expressed an interest in acquiring a portion of the output from Deerfield Wind, and discussions with these and other prospective purchasers continue. Deerfield Wind anticipates that prior to the construction of this facility, arrangements will be made to sell the remaining output under long-term bilateral contractual arrangements.

III. SECTION 248 CRITERIA

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

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

36. 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.

37. In the USFS' initial screening of Deerfield Wind's application for a Special Use Authorization, it found that the Project is consistent with the GMNF Long Range Management Plan.

38. Deerfield Wind has provided a minimum of forty-five days advance notice of the Project to the Readsboro Planning Commission, Searsburg Selectboard, Bennington County Regional Commission, and Windham Regional Commission, pursuant to 30 V.S.A. § 248(f). Notice was also provided to towns within a ten-mile radius of the Project.

39. The Town of Readsboro has adopted a Town Plan, dated August 2005. The Town of Searsburg has not adopted a Town Plan.

40. 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. Nor will it hinder the predominant activity taking place on thousands of acres of surrounding lands –commercial forestry and traditional recreational uses (hunting, fishing, snowmobiling, hiking, etc).

41. The Project will not contravene any land conservation measures contained in the Readsboro Town Plan, in that it: (i) avoids areas dominated by slopes greater than 25% and minimizes earth disturbance in areas greater than 15% slope; (ii) will not cause an undue adverse impact to the

scenic beauty of mountaintops and ridges; and (iii) avoids fragmentation of large tracts of conserved forest lands and is designed to have minimal impact on the special forest resource values of the area.

42. The Windham Regional Commission adopted a Regional Plan in October 2006. The Regional Plan provides little discussion on siting electric generation facilities and less on siting wind power facilities. However, the Project does directly address the Plan's stated goal of "reducing the Region's dependence on outside energy sources" by providing a local source of renewable energy. The Project is also consistent with the Plan's individual land use policies.

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

43. 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…" The Project meets a present and future demand need for cost effective electricity in Vermont and in the New England Power Pool.

44. Deerfield Wind, through PPM, has entered into a letter of intent with Green Mountain Power (GMP) regarding the purchase by GMP of up to 50% of the Project's output.

45. Deerfield Wind does not run any energy conservation or efficiency programs, and it is not required to under state law. Nor does Deerfield Wind have the ability to implement load management measures, as it does not provide electricity at retail to customers within a defined service territory.

46. For electric power production and distribution, all of the New England states are managed as one regional electric system, and there is a growing demand for electricity produced from "green resources" in New England. The New England market for renewable energy is expected to

increase by almost 3 times between 2007 and 2015, and wind energy is projected to fill a substantial portion of that demand. Demand for renewable energy is driven both by Renewable Portfolio Standards (RPS) enacted by 14 states (including MA, CT, RI and NY) to encourage renewable energy development, as well as by consumer demand for green energy.

47. Vermont's Act 61 provides a variety of mechanisms to encourage the development of renewable power, including the requirement that Vermont utilities (retail electric providers) include in their supply portfolios an amount of new renewable energy equal to their incremental load growth between 2005 and 2012, capped at no more than 10% of the utilities' 2005 electric load. In addition to these legislatively-mandated investments in renewable energy, surveys indicate that electric consumers overwhelmingly support renewable energy and that public support is growing.

48. It is in the public interest to increase fuel diversity. Over the past decade, the major trend in the mix of fuels used for electricity generation in New England has been the shift toward natural gas from nuclear and oil.

49. Demand for natural gas has grown from all sectors, and this demand growth has led to rising gas prices and to more volatile prices. Rising and more volatile gas prices will make wind energy more valuable, because higher average gas prices raise average wholesale electricity costs, increasing the value of energy produced by wind projects. In addition, because the costs of a wind project are not affected by fluctuating fuel prices, they are much more stable than the costs of generation with gas or oil.

50. The Project will also help serve Vermont-specific needs by increasing and diversifying in-state electricity generating capacity. Vermont currently receives the majority of its electric power

from two sources – Vermont Yankee nuclear power plant and Hydro Quebec. Together, these two sources account for over two-thirds of Vermont's peak energy demand. Vermont Yankee's license expires in 2012, and the amount of power available through Hydro Quebec contracts will drop dramatically in 2016.

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

51. The Project "will not adversely affect system stability and reliability," either locally or regionally.

52. 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. The wind turbines will be disconnected from the transmission line in the event of ground faults, phase faults, over-current, under and over voltage, under and over frequency, and system imbalance. In addition, the turbines have power electronics, which provide soft-start capability to reduce starting surges, to ride through short-term voltage dips, and to provide or consume reactive power to improve voltage regulation on the 34.5 kV system.

53. The Project will be interconnected to the Vermont 69 kV transmission system via a three breaker ring bus configuration, which will improve reliability of the transmission line. Control and protection systems for the wind facility will be designed and installed consistent with the transmission line owner's recommendations.

54. The Project does not violate any voltage, short circuit, or power quality standards.

55. ISO-New England is presently conducting an Interconnection System Impact Study. The Study is expected to be completed in early 2007. This study includes an examination of potential thermal and reliability effects of the Project on the electric grid.

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

56. The Project "will result in an economic benefit to the State and its residents."

57. The Project will provide tax revenues (or payment in lieu of taxes) to the State and Towns of Searsburg and Readsboro; clean air benefits that have a monetary value; power to Vermont utilities at a cost-effective rate; temporary and permanent jobs; and other direct and indirect economic benefits to the State.

58. The Project is a renewable energy project that will not produce air emissions from the generation of electricity, including NOx, SO_2, and CO_2. Energy production at this Project will likely displace higher cost power that is supplied by a fossil-fueled generation plant that does emit pollutants. An economic analysis calculated a projected annual benefit of between $0.6 million and $1.1 million in avoided external costs due to displaced conventional generation, depending both on project size and on the valuation model.

59. The cost of project construction is expected to be about $2 million dollars per installed megawatt. Dozens of workers will be employed at the site during construction, drawn both from within and outside Vermont. These workers will generate local economic activity through the purchase of lodging and meals and through other expenditures. Once the Project is operational, 3 to 5 employees will be required to maintain it. These workers will likely be drawn from the local work force.

60. The Project is not expected to reduce local property values or negatively impact tourism. Public acceptance surveys done in connection with the GMP Searsburg facility indicate that public acceptance for wind power in this region of the state is quite good. Several property value studies have shown that the presence of windfarms has not impacted property values in the surrounding towns.

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

1. Outstanding Resource Waters

61. There are no Outstanding Resource Waters on the project site or in any adjacent areas.

2. No Undue Air Pollution

62. The Project will not "result in undue air pollution."

63. The wind turbines will not generate any air pollutants. 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, including CO_2, SO_2, and NOx.

64. Construction and maintenance of the Project may result in de minimis air quality impacts including fugitive particulate matter (dust) generated by construction and use of the access road as well as emissions from vehicles. Fugitive dust emissions will be minimized through the implementation of site-specific plans by the general contractor. In general, dust emissions will be temporary, infrequent, of short duration, and are not expected to cause either short term or long term undue air pollution.

65. The Project is expected to result in sound levels at the nearest residences of 45 dBA or less. Noise levels from the turbines will be at or below average background noise levels that occur at permanent or seasonal residences. No local applicable, state, or federal noise standards or guidelines would be exceeded.

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

66. The Project will not "result in undue water pollution."

67. Excluding several small isolated Class III wetlands, and several small intermittent or perennial streams, no other surface waters have been identified within the Project area, including rivers, lakes or ponds.

68. The Project will not have an undue adverse impact on the limited wetlands and intermittent streams identified in the Project area.

69. Construction of the Project will require coverage under the NPDES General Permit (or an Individual Permit) for Stormwater Runoff from Construction Sites. Operation of the Project will require coverage under the State Stormwater General Permit (or Individual Permit) for New Development. Based upon preliminary designs, the Project is capable of meeting the standards required to obtain these permits. All stormwater management will be designed for Water Quality, Recharge, Channel Protection, Overbank Flood and Extreme Storm conditions.

70. Deerfield Wind will prepare an Erosion Prevention and Sediment Control Plan as part of the post-CPG final plans.

71. Excavated rock and organic debris will be disposed of on-site, and inorganic materials at an approved off-site landfill. On-site disposal of fill material will be located to have no negative effect on existing drainage patterns or environmentally sensitive areas.

4. Water Conservation

72. Design of the Project will take water conservation measures into consideration, and will implement such measures where technically and economically practicable. Construction and operation of the Project will use a minimal amount of water. Water for construction will be brought on site by the contractor. No running water is needed to maintain the wind turbines and other equipment, and maintenance staff will bring water to the site if necessary.

5. Floodways

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

6. Streams

74. 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."

75. Excluding several small isolated Class III wetlands, and several small intermittent or perennial streams, no other surface waters have been identified within the Project area, including rivers, lakes or ponds.

76. The Project would make 12 stream crossings. Specific stream crossing designs will be prepared in coordination with Deerfield Wind's civil engineer, environmental consultant, and the Vermont Department of Environmental Conservation as part of the post-CPG final design plans. It is expected that there will be no significant impacts to streams from the proposed development.

7. Shorelines

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

8. Wetlands

78. The Project will comply with the Vermont Wetland Rules. Based upon preliminary designs, the Project will not cause an undue adverse impact to the protected functions and values of any Class I or Class II wetlands. Initial site review has not identified any Class I or Class II wetlands within 300 feet of proposed turbine areas or supporting roads.

79. There are a total of eleven Class III wetlands within the Project Area. Three Class III wetlands occur along the Putnam Road access route, and three occur along the southern access route. Five Class III wetlands have been identified in the Eastern Project Area. Two of the wetlands occur in zones of clearing for tower construction. No dredging, filling or excavation will be done within these wetlands, but large trees will be cleared. One wetland is a small (402 sq. ft.)

seepage wetland, which would be filled as part of construction of the access road to the Western Project Area. This wetland is not significant for any functions and values according to the Vermont Wetland Evaluation Form, and filling it would thus not constitute an undue adverse impact upon wetland resources.

80. The Petitioner will work with the Forest Service to minimize negative effects to the maximum extent practicable. Based upon the total area of potential impacts to Class III wetlands, a §404 wetlands permit should not be required from the U.S. Army Corps of Engineers.

9. Sufficiency of Water and Burden on Existing Water Supply

81. There is "sufficient water available for the reasonably foreseeable needs" of the Project. The Project will not "cause an unreasonable burden on an existing water supply, if one is to be utilized."

82. Water for construction activities will be brought on-site. A water supply well will be installed at the maintenance shed, or will be provided by an existing supply secured by Deerfield Wind. This well will only be used for domestic consumption and sanitary facilities at the maintenance shed.

10. Soil Erosion

83. 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."

84. Deerfield Wind's civil engineer has presented site-specific soil data and other information that will be used to develop a site-specific Erosion Prevention and Sedimentation Control Plan which will comply with state standards. The appropriate juncture to prepare the Plan is at the final design stage, as a post-CPG filing.

85. Deerfield Wind will apply for coverage under the NPDES General Permit for Stormwater from Construction Sites and the State Stormwater General Permit for New Development.

11. Traffic

86. 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." All public roads can handle the expected volume of construction and post-construction traffic without creating congestion or unsafe conditions.

87. The Project will not unreasonably congest public roads. The load trailers carrying Project components have axle numbers that distribute load to ensure that the gross weight does not exceed the structural limitations of pavement or bridges. The horizontal geometries of the public way will not pose a problem, as Deerfield Wind can use more flexible, but more expensive, equipment for site access if necessary. Local public roads that will be involved include Putnam Road, Route 8, and Sleepy Hollow Road. The junction of the present Putnam Road and Route 8 will need to be widened and re-graded.

88. The Agency of Transportation (AOT) has been notified of the Project. AOT does not expect the Project to create unreasonable congestion. Deerfield Wind's engineers are working with AOT on access to the Project from State Route 8.

12. Educational Services

89. The Project will not "cause an unreasonable burden on the ability of a municipality to provide educational services." Deerfield Wind has notified the Office of the Superintendent of Schools, and the Superintendent has responded that he does "not envision that the project will create an unreasonable burden on the Windham Southwest Supervisory Union regarding educational services for Searsburg or Readsboro."

90. The construction phase of the Project will occur over a 9 month period during the 2008 construction season. It is unlikely that temporary construction workers and their families will

move to the area due to the Project. Once the Project is operational, 3 to 5 workers, possibly hired from the existing workforce, will be devoted to operation and maintenance.

13. Municipal Services

91. The Project will not "cause an unreasonable burden on the ability of the local governments to provide municipal or governmental services."
92. The private roads accessing the site will not require municipal expenditures for maintenance. Town roads – including Putman Road and Sleepy Hollow Road – may require minor alteration during the construction phase, which would be accomplished at Deerfield Wind's expense.
93. The traffic on the public roads associated with project operations will be minimal (approximately 5 trips per work day); thus additional maintenance of the town highways should not be necessary.
94. Waste disposal will be handled through private haulers, and will create no burden on local government.
95. The appropriate fire and rescue departments, including the Windham County Sheriff's Office, the VT State Police, and others have been notified, and responses received to date indicate they do not anticipate any unreasonable burdens or hardship in serving this Project and in continuing to serve Searsburg and Readsboro and the surrounding communities. All roads to the Project will be of sufficient size and capacity to handle any emergency vehicles.
96. The Project will provide a net benefit to the town and surrounding communities, in that it will generate local property taxes but require very little in the way of municipal services. In addition, Deerfield Wind will be offering facilities for radio repeaters for use by police, fire, and rescue services that serve the region.

14. Aesthetics

97. The Project will not "cause an undue adverse effect on the scenic or natural beauty of the area [or] aesthetics."

98. The visual analysis indicates that the complex topography and abundant forest cover in the region give it a generally high "visual absorption capacity" and will make the Project difficult to see from many vantage points. The Project will be on two ridges that are horizontal in form and visually indistinct and not among the more prominent ridges or focal points in the region. Clearing and grading for construction of the access roads and wind turbines will be consistent with the typical visual quality impacts of other forestry activities on the GMNF

99. The visual impact of the Project diminishes as the viewer moves away from the facility. The visual prominence of the Project continuously decreases as distance from the Project increases. At over five miles away, the Project is a relatively small component of potential viewsheds. There are no major population centers within four miles of the Project area. The Project will be visible in the foreground from only one mile of State Road; no other highly sensitive foreground views of the Project will occur. In all highly scenic views, the Project occupies only a small portion of the view and will not be a focal point or interfere with the experience of scenic resources.

100. In many views of the Project, the existing GMP turbines will also be seen, and the Project will appear as a logical extension of the turbines along the ridgeline. At night, FAA lighting will be present on 8 to 10 of the new turbines, according to the proposed lighting plan that Deerfield Wind has developed to be consistent with new draft FAA guidelines.

101. Using the Quechee test, many aspects of the Project would not have an adverse impact on the scenic and natural beauty of the area. While certain project components would have an

adverse impact, these impacts would not be undue. The Project will not offend the sensibilities of the average person, will not violate any clear written community standards designed to preserve the aesthetics or scenic beauty of the area, and will incorporate all generally available mitigation measures that a reasonable person would take to improve the harmony of the Project with its surroundings.

102. The sound levels from the Project will cause no undue adverse impact on aesthetics.

103. The Project is expected to result in sound levels at the nearest residences of 41 dBA or less. Noise levels from the turbines will be at or below existing average background noise levels that occur at permanent or seasonal residences. No local applicable, state, or federal noise standards or guidelines would be exceeded.

15. Historic and Archaeological Sites

104. The Project will not "cause an undue adverse effect on any known historic resources." The Project is also "unlikely to have an undue adverse effect on any significant archaeological resources."

105. The proposed Eastern and Western Project Areas both possess locations that may be sensitive for prehistoric resources. The potential for unknown prehistoric sites remains a consideration, due to the Project area's location and attributes.

106. Historic archaeological sensitivity in the proposed Eastern Project Area is low.

107. Historic archaeological sensitivity for the proposed Western Project Area is high. The site of the former "S. Crosier" residence is located within the Project area footprint and is associated with the first permanent settler of Searsburg, dating to the 1820s. However, no buildings or structures will be acquired or physically altered or removed by the Project, and thus impacts, if

any, would be limited to those resulting from the visibility of the wind project from the historic structure.

16. Rare and Irreplaceable Natural Areas, Necessary Wildlife Habitat, and Endangered Species

a. General

108. The Project will not "cause an undue adverse effect on . . . rare or irreplaceable natural areas." The Project will not "destroy or significantly imperil necessary wildlife habitat or endangered species."

109. Eastern Project Area: The proposed turbines are located on a ridgeline dominated by Montane Spruce-Fir Forest, Montane Yellow Birch-Spruce-Fir Forest and Northern Hardwood Forest. On this ridgeline, these communities commonly grade into one another. The tree canopy is composed of red spruce, balsam fir, red maple, beech, and yellow birch. Canopy dominance varies depending on the local environmental conditions. When hardwood trees are dominant, they are often relatively short (10 meters tall) and somewhat stunted because of the harsh conditions. The shrub layer consists of hobblebush, fir and lesser amounts of beech. The herbaceous strata is typically dominated by mountain wood fern, with lesser amounts of blue bead lily, mountain wood sorrel, and wild sarsaparilla.

110. Western Project Area: This area is colonized by a northern hardwood forest and, to a lesser extent, a red spruce-northern hardwood forest. The tree canopy is dominated by beech, yellow birch, and smaller amounts of red spruce. There is usually a slight sub-canopy (20% cover) composed mostly of beech trees. The shrub stratum consists of beech, red spruce and hobblebush and comprises 20% cover. The herbaceous layer is dominated by hay scented fern, wood ferns, beech drops and mountain wood sorrel.

b. Significant Natural Communities

111. Site surveys have not identified any significant natural communities, and the communities represented are fairly typical examples of common community types. The Vermont Nongame and Natural Heritage Program does not consider the communities in the Eastern or Western Project Areas to be significant natural communities.

c. Rare, Endangered or Threatened Species

112. No state or federally listed endangered or threatened plant or animal species were discovered during initial field surveys or literature searches. In addition, no species on the GMNF Regional Forester's Sensitive Plants list were discovered during field studies.

d. Necessary Wildlife Habitat

113. The Project will not destroy or significantly imperil any necessary wildlife habitat, including avian species, bat species, black bear, white-tailed deer, moose, fish species, or on any state or federally listed threatened or endangered species.

Deer

114. No white-tailed deer over-wintering habitat has been identified within 300 feet of the proposed turbine locations or the anticipated locations of the necessary access roads.

Black Bear

115. The Project site is known to have potential bear habitat. American Beech trees that occur throughout the forested regions of the Eastern and Western Project Areas may be used by bear as feeding areas. Initial studies indicate that many of the trees in this area are unhealthy due to infestation. There is evidence of some bear use.

116. Construction activities will affect some of the potential bear habitat and may have some short-term disruptive effects on bear use but is not expected to be significant or to impact the

local population of bears. If the 24-turbine alternative is constructed, it is estimated that approximately 643 bear-scarred beech trees will be lost. Loss of these trees is not expected to impact the local population of black bear. Annual beech nut production in general is highly variable and thus not a reliable food source.

117. Once constructed, operation and maintenance of the facility is not anticipated to have an undue adverse effect on black bear or its habitat.

118. Deerfield Wind has designed the Project to avoid and minimize impacts to bear habitat, including the following: (i) selection of turbine sites to minimize removal of beech trees; (ii) beech tree re-generation will be encouraged during post-construction; (iii) scheduled and unscheduled maintenance activities will be restricted to daylight hours whenever practical; (iv) regular maintenance will be scheduled to coincide with seasonal bear inactivity; (v) food or other trash generated at the site will be picked up and transported to trash containers for disposal.; and (vi) education and training of employees to minimize impacts on bear activity.

Moose

119. The Project will not destroy or significantly imperil necessary wildlife habitat for moose.

Small Mammals

120. The Project is unlikely to have any significant impact on small mammal species. There are no "necessary" habitat elements for any of the small mammal species identified at or near the Project area. There is no evidence that the proposed wind project would negatively impact these species.

Avian Species

121. Bird species present at or near the Project are primarily forest-nesting species, with some edge and brush species in the Western Project Area. The habitat on site does not appear to be

suitable for any threatened or endangered, listed bird or bat species or Vermont species of concern. Nor is the site an important nesting or foraging area for federally-listed species.

122. Fall raptor migration in the Project area is low relative to sites that are known to concentrate migrants in large numbers, which reduces the potential for migrating raptors to come into close contact with the wind turbines.

123. Radar surveys indicate that bird migration patterns are generally similar to patterns of low passage rates observed at other sites in the region. Flight heights indicate that the vast majority of the migrants are flying at altitudes well above the turbine height. Consequently, the risk of collision to night-migrating birds is very limited.

124. A one-season mortality study performed at the existing Searsburg facility in 1997 did not find any bird or bat carcasses near the wind turbines.

125. Construction of the facility may have some short-term effect on resident bird use of the Project area, but is unlikely to have an undue adverse effect, and is not likely to destroy or significantly imperil necessary bird habitat.

126. Impacts to avian species from the Project may include habitat fragmentation and collision fatalities. Investigations completed to date in Vermont and throughout the United States indicate the potential negative effects to bird populations will not be biologically significant.

127. Deerfield Wind has incorporated mitigation measures into the project design to avoid and minimize bird mortality, including but not limited to: (i) burying electrical connection between turbines; (ii) a forest management plan will provide for the post-construction regeneration of forest as close to turbines, roads and other infrastructure as feasible; (iii) for FAA lighting, use of only single red strobes with the longest off cycle possible, on the fewest turbines permitted by the FAA; and (iv) impacts to wetlands have been avoided and/or minimized.

Bat Species

128. The Project area is located on a mountaintop in southern Vermont, which reduces the overall abundance and diversity of bats.

129. Vermont and Massachusetts are at the very northern end of the Indiana Bat habitat range. Best available evidence indicates that the Indiana Bat favors the low-lying Champlain Valley region and adjacent foothills over more mountainous terrain.

130. Deerfield Wind commissioned bat survey work which showed a very low number of detected bats. This low detection rate could indicate a small bat population, avoidance of the area by bats, poor conditions for bats, or a variety of other factors.

131. The Project is unlikely to have an undue adverse effect on bat populations, and is not likely to destroy or significantly imperil necessary bat habitat. The Project is located within the general geographic range for several bat species, but based upon the available data it is unlikely that there are any regionally significant reproductive populations near the Project.

17. Development Affecting Public Investments

132. The Project will not unnecessarily or unreasonably endanger the public or quasi-public investment in public facilities, services, or lands adjacent to the Project. The Project will not 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 adjacent to the Project.

133. The Project area is within the Green Mountain National Forest. It is also directly adjacent to several public roads, including Route 8, Putnam Road, and Sleepy Hollow Road. The Project's purpose and design are consistent with the GMNF Long Range Management Plan. Potential impacts to public roads will be minimal and temporary during construction of the Project.

134. To the extent that the Project is visible from other public roads, lands, parks, or forests, the Project will not have an undue adverse effect on the aesthetics or scenic beauty of those areas.

135. The Project's transmission line is being designed in consultation with VELCO and other transmission line owners to preserve the stability and reliability of the system.

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

136. This criterion is not applicable to this Project or other merchant plants, because Deerfield Wind is not required under state law to prepare an IRP.

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

137. The Project complies with the provisions of the 2005 Vermont Electric Plan, embodying a commitment to clean, reliable, affordable, and sustainable energy that the Plan envisions. Deerfield Wind has sent a letter to the Department of Public Service requesting a determination of compliance under the Plan.

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

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

139. Deerfield Wind will construct a 34.5 kV transmission line that will run from the turbine arrays to a new substation, where it will interconnect with VELCO's 69 kV line.

140. Deerfield Wind has conducted studies demonstrating the Project will not impact the stability or reliability of VELCO's system. Any project-induced costs will be borne by the Petitioner.

Prefiled Testimony and Exhibits

141. In support of this Petition, Deerfield Wind submits prefiled testimony and exhibits sponsored by the following witnesses:

John Zimmerman

Mr. Zimmerman provides a detailed description of the Project. He discusses the wind resources and siting of the Project, project economics, project components, construction and operation and maintenance, and the Project's compliance with the criteria of 30 V.S.A. § 248.

Ezra Hausman

Dr. Hausman testifies regarding 30 V.S.A. § 248(b)(2) and (b)(4). He reviews the need for new, fixed cost sources of power in the state and the region; the demand for renewable energy in particular; the expected environmental and economic benefits of the Project in terms of displaced air emissions of pollutants; and the financial viability of the Project.

James Brown

Mr. Brown describes the letter of intent between Deerfield Wind, LLC and Green Mountain Power concerning the purchase of power from the Project, explaining why there is a need for this power and how this agreement is in the interest of GMP and its ratepayers.

Dave Estey

Mr. Estey describes the Project's proposed transmission facilities and the electrical interconnection options with the utility transmission system. He also provides testimony regarding the Project's compliance with 30 V.S.A. § 248 (b)(3) and (b)(10).

Jason Krzanowski

Mr. Krzanowski testifies concerning site design, stormwater, soil erosion control, and transportation issues as they relate to the Project. The testimony concludes that the Project will not cause undue water pollution or unreasonable soil erosion, and will not cause unreasonable congestion or unsafe conditions on public roads.

Hope Luhman

Ms. Luhman testifies regarding the work performed by The Louis Berger Group, Inc. concerning the archaeological and historic resources at or near the Project. Ms. Luhman's conclusion is that the Project is unlikely to have an undue adverse effect on any known historic resources or on any significant archaeological resources.

Kenneth Kaliski

Mr. Kaliski's testimony evaluates the noise impacts of the Project. He concludes that the Project will not have undue adverse impacts on noise aesthetics or on health.

Jean Vissering & Michael Buscher

Ms. Vissering and Mr. Buscher provide an assessment of the visual impacts of the Project. They summarize the visual assessment process and areas of visibility, the so-called "Quechee" criteria, and conclude that the Project would not result in an undue adverse affect to the scenic or natural beauty of the area.

Michael Lew-Smith

Michael Lew-Smith describes his investigations concerning wetlands, surface water bodies, rare and irreplaceable natural communities, and rare, threatened and endangered plant species. Mr. Lew-Smith assesses the Project's potential impacts under Act 250 criteria 1(A), 1(D), 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.

Jeffrey Parsons

Mr. Parson's describes his investigation of the Project's impacts on wildlife and wildlife habitat. In particular, he addresses the potential impacts on large mammals, small mammals, and rare threatened and endangered species. He also investigates indirect impacts of the Project on black bear. Mr. Parsons concludes that the Project is unlikely to have any significant impact on mammals and that the area of impact to black bear would be minimal.

Jeffrey Wallin

Mr. Wallin describes his evaluation of the potential impacts of the Project on local bear populations, and concludes that the Project should not have an undue adverse impact on bears.

Robert Roy and Wallace Erickson

Mr. Roy and Mr. Erickson describe the bird and bat surveys conducted and assess the potential impact on migrating birds and migrating and resident bats. They conclude that the Project should not have any undue adverse effect on migrating or resident birds or bats.

Paul Kerlinger

Mr. Kerlinger describes his work in performing an avian risk assessment and breeding bird survey. Mr. Kerlinger concludes that the Project should not have an undue adverse impact to any birds, including rare, threatened, or endangered species, due to collision risk or habitat loss.

A prefiled evidence table listing exhibits under each of the Section 248 criteria to which they apply is included in the accompanying material.

Request for Approval of Conceptual Plans

142. Deerfield Wind requests conceptual approval of the Project, followed by post-certification review of final design plans, pursuant to PSB Rule 5.402(C)(3). Submitting design-level plans at

the application stage for a wind generation project is infeasible, impractical, and not cost effective relative to the benefits. It is also unnecessary, as Deerfield Wind has provided adequate site-specific evidence for the Board to make affirmative findings under section 248.

Notice and Consultation

143. In August 2005, Deerfield Wind provided a minimum of 45 days advance notice of this Petition to the Readsboro Selectboard and Planning Commission, the Searsburg Selectboard and Planning Commission, and the Windham Regional Commission, pursuant to the requirements of 30 V.S.A. § 248(f). Further, in accordance with the December 2004 recommendations of the Governor's Commission on Wind and Regulatory Policy, Deerfield Wind extended the notice period to 60 days, and provided the advance notice to the Bennington County Regional Planning Commission and to all towns within a ten-mile radius of the Project.

144. Deerfield Wind has worked in good faith with the Vermont Agency of Natural Resources and the Vermont Department of Public Service to address their need for information regarding the Project, prior to the filing of this Petition.

145. During the past three years, Deerfield Wind has made a good faith effort to meet with stakeholders, including municipal and regional planning commissions for those towns and regions wholly or partially within a ten-mile radius of the Project. Deerfield Wind has met with the towns of Searsburg and Readsboro about this Project and both towns have sent representatives to participate in Collaborative Team meetings.

146. Deerfield Wind has served this Petition, together with supporting prefiled testimony and exhibits, on the parties specified in 30 V.S.A. § 248(a)(4)(C). Deerfield Wind has also provided notice of the filing of the Petition to all towns within a ten-mile radius of the Project, and to abutting landowners.

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. §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 8th day of January, 2007.

Deerfield Wind, LLC

By:

Andrew Raubvogel, Esq.
Shems Dunkiel Kassel & Saunders, PLLC
91 College Street
Burlington, VT 05401
(802) 860-1003, x 107
araubvogel@sdkslaw.com

Geoffrey H. Hand, Esq.
Shems Dunkiel Kassel & Saunders, PLLC
91 College Street
Burlington, VT 05401
(802) 860-1003, x 110
ghand@sdkslaw.com