STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7628

Joint Petition of Green Mountain Power Corporation, Vermont Electric Cooperative, Inc. and Vermont Electric Power Company, Inc. for a Certificate of Public Good pursuant to 30 V.S.A. § 248, to construct up to a 63 MW wind electric generation facility and associated facilities on Lowell Mountain in Lowell, Vermont and installation or upgrade of approximately 16.9 miles of transmission line and associated substations in Lowell, Westfield and Jay, Vermont.

BRIEF OF THE VERMONT DEPARTMENT OF PUBLIC SERVICE

March 21, 2011

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I. INTRODUCTION AND PROCEDURAL HISTORY

On May 21, 2010, Green Mountain Power Corporation ("GMP"), Vermont Electric Cooperative, Inc. ("VEC"), Vermont Electric Power Co., Inc., and Vermont Transco LLC (together, "VELCO," and with GMP and VEC the "Petitioners"), petitioned the Public Service Board (the "Board" or "PSB"), pursuant to 30 V.S.A. § 248 for a Certificate of Public Good ("CPG") authorizing GMP to construct and operate a 63 MW wind electric generation facility along with associated transmission and interconnection facilities atop ridges in the towns of Lowell, Westfield, and Jay, Vermont. On July 7, 2010, a pre-hearing conference was held at the Board's hearing room on the third floor of the Chittenden Bank Building at 112 State Street in Montpelier. Appearances were entered as follows: Peter H. Zamore, Esq. and Donald J. Rendall, Esq., for GMP; Victoria J. Brown, Esq., and Joslyn Wilschek, Esq., for VEC; Mark Sciarotta, Esq., for VELCO; Geoffrey Commons, Esq, and John Beling, Esq., for the Department of Public Service ("Department" or "DPS"); and Judith Dillon, Esq, for the Vermont Agency of Natural Resources ("ANR").[1] Adjoining landowners and other potential intervenors were present at the prehearing conference.

Subsequently, the following individuals and groups sought and were granted intervention on a permissive basis in this proceeding: Conservation Law Foundation ("CLF"), Vermont Public Interest Research Group ("VPIRG"), Central Vermont Public Service ("CVPS"), Donald and Shirley Nelson, Kevin McGrath, Milo and Bonnie Day, Jack Brooks, Lowell Mountains Group ("LMG"), Green Mountain Club ("GMP"), Dyer-Dunn, Inc. ("DDI"), Town of Albany,

[1] The Lowell Mountain Group was present at the pre-hearing conference, and, through counsel, stated its intent to file a motion to intervene in the proceeding.. Docket 7628, Pretrial Hearing Memorandum, Scheduling Order, and Notice of Workshop of 7/14/10 at FN1.

Town of Craftsbury and the Town of Lowell.[2]

Consistent with the requirements of 30 V.S.A. § 248(a)(4)(A), a public, non-technical hearing was held on September 23, 2010 at the Lowell Graded School in Lowell, Vermont. Site visits were conducted by the Board on September 23, 2010, November 12, 2010, and January 11, 2011.

In a May 21, 2010 motion, GMP sought confidential treatment of certain prefiled testimony and related exhibits of GMP witness Douglas Smith. The Board granted GMP's motion by Order on August 5, 2010. GMP later sought an additional protective order regarding further certain testimony and exhibits of Smith on November 22, 2010. On December 22, 2010, the Board granted GMP's motion in part.

An initial schedule was established and set forth in the prehearing conference memorandum and scheduling order issued July 14, 2010. However, on December 13, 2010, the Town of Albany filed with the Board a motion to modify the scheduling order, due to GMP's addition of two additional turbine models under consideration for the project. As a result, the Board amended the schedule in an Order on December 27, 2010, giving the Town's witnesses additional time to conduct research on the new turbines' noise impacts.

Ten days of technical hearings were held from February 3 through February 24, 2011.

II. PETITIONER BACKGROUND AND PROJECT DESCRIPTION

Findings

1. On May 21, 2010, Green Mountain Power Corporation, Vermont Electric Cooperative, Inc., Vermont Electric Power Company, Inc, and Vermont Transco LLC ("Petitioners") petitioned the Public Service Board, pursuant to 30 V.S.A. § 248(a) for a Certificate of

[2] Docket 7628, Order of 9/3/10.

Public Good ("CPG") authorizing petitioners to construct and operate a 63MW wind generation facility and associated transmission and interconnection facilities on ridgelines in the Town of Lowell, Vermont, and the installation or upgrade of approximately 16.9 miles of transmission line and associated substations in the Towns of Lowell, Westfield, and Jay, Vermont.

2. GMP's offices are located at 163 Acorn Lane, Colchester, Vermont

3. VEC's offices are located at 42 Wescom Road, Johnson, Vermont.

4. VELCO's offices are located at 366 Pinnacle Ridge Road, Rutland Vermont.

5. GMP and VEC provide electric power in the state of Vermont, and VELCO provides transmission service in the state of Vermont.

6. Depending on the turbine selected, the towers will be between 410 feet (125 meters) to 459 feet (140 meters) from ground elevation at the base of the turbine to the tip of a blade at its highest position. The towers supporting the nacelle and rotor assemble are 262 feet (80 meters) to 279 feet (85 meters) tall. Some of the wind turbines will have night-time flashing red lights, mounted on the nacelle, as required by the Federal Aviation Administration.

7. The infrastructure supporting the wind farm portion of the Project includes a 2.5 mile access road from Route 100 to the turbines located along the ridgeline, a ridgeline crane path, turbine pads to facilitate construction of the turbines, a step-up substation and maintenance building halfway up the access road, and an electrical collection system (part of which will be underground) that will connect the turbines to the local transmission system.

8. There will be upgrades to the local transmission system, including improvements to the

two existing VEC substations in Lowell and Jay, Vermont, and improvements to existing transmission lines between the Lowell #5 substation and the VELCO 115 kV system in Jay, Vermont.

9. A New VELCO Substation will be needed to interconnect the existing 46 kV system to the VELCO 115 kV system in Jay, Vermont. VELCO is presently seeking § 248 approval to construct a substation which ties into the VEC Jay Peak Tap Switching Station. *In re Petition of Vermont Electric Power Co., Inc., for a Certificate of Public Good*, Docket No. 7708.

10. The Board approved VEC's Jay Peak Tap switching station on August 19, 2010. *In re Petition of Vermont Electric Cooperative, Inc., for a Certificate of Public Good*, Docket No. 7604. VEC has commenced construction of the switching station, and filed for an amendment that would allow it to interconnect the switching station to the proposed Jay Tap substation on January 24, 2011. The two dockets are proceeding concurrently and technical hearings are scheduled to take place in May, 2011.

11. GMP proposes to decommission the windfarm after its useful life in a manner generally consistent with the requirements established by the Board in recent wind generation § 248 proceedings. However, GMP does not propose to provide the security for the cost of decommissioning, due to its utility status.

12. GMP provided 45-day advance notice to the persons entitled to the notice under 30 V.S.A. § 248(f). The changes to the project from the description contained in the 45-day notice include (1) a reduction in the proposed number of turbines from 20-24 to 20-21, (2) the addition of temporary construction access by means of Meek Road, and (3) adjustments to the dimensions of certain components, including the access road length

(from 2.25 to 2.5 miles), crane path width (from 36 to 34 feet), Project Substation height (from 40 to 45 feet), and pole heights for the segments between the underground collector and the KCW Substation (from 43-52 feet) and along Route 100 to the Lowell #5 substation (from 43 to 35-52 feet).

13. On September 29, 2010, Petitioners filed with the Board final forms of a Renewable Energy Purchase Agreement ("REPA") and a Joint Ownership Agreement ("JOA") between Vermont Electric Cooperative, Inc. ("VEC") and Green Mountain Power ("GMP"). The agreements will not be executed until after the 90-day notice period under Rule 5.200 has expired.

III. CRITERIA UNDER 30 V.S.A. § 248(b)

1. VS.A. § 248(b)(1) Orderly Development of the Region

14. The Project will not unduly interfere with the orderly development of the region. This finding is supported by findings 15 to 20 below.

15. The Town of Lowell voted at Town Meeting on March 2, 2010 by a margin of 342 to 114 to support the Kingdom Community Wind Project proposed for Lowell Mountain. GMP has also entered into an agreement with the Town of Lowell that provides financial support as well as support for town services. An extensive outreach effort conducted by local residents and GMP facilitated understanding of and support for the Project. Therefore it can be concluded that this vote represents both a directive to the legislative body and an indication that the community considers this Project to be consistent with the orderly development of the town as a whole. Exh. Pet. DR-2; Dostis pf. at 7-9.

16. The NVDA Regional Plan provides guidelines for wind energy development but also

defers to the local communities as to their decision-making prerogatives for developing renewable energy facilities. The Plan states that towns may take different positions on wind power and that each town *consider* wind energy. Thus, the Project is consistent with the Regional Plan. Exh. Pet. DR-2; Exh. Pet. DR-2, App. 11.

17. There are no specific land use provisions or restrictions within the Town or Regional Plan specifically applied to this area of Lowell that would preclude the development of the Project. This Project is located in what would be considered a Rural Area and the NVDA Regional Plan states that Rural Areas should "receive very little commercial or industrial development unless it occurs in an industrial park, in an area specifically designated in the local bylaw, or occurs in an appropriate scale for its rural surroundings." Exh. Pet. DR-2.

18. The Project is located in a zoning district in which wind is permitted as a conditional use. Grid scale wind turbines and projects are, by their very nature, developments that must be above the treeline and of a certain height and located along ridgelines, which are often in rural areas. They cannot therefore readily conform to the criteria set forth in the NVDA Regional Plan with regard to commercial or industrial development in rural areas. Exh. Pet. DR-2.

19. The actual development footprint of this Project will be relatively small given that only access roads coupled with collector lines and areas for the turbines will be cleared for the Project. Thus, when considered within the context of the extensive amount of rural area in this region, the Project takes up a very small amount of this area and will have little, if any impact on the overall orderly development of the region. In fact, the Project will be connected to an existing transmission corridor at the base of the Project site, and this

Project will upgrade that corridor, sustaining and enhancing orderly development. Exh. Pet. DR-2.

20. The Project does not have an undue adverse impact on the orderly development of other towns within the ten-mile radius. There are no adverse impacts on traffic or on the local economy that would be unfavorable to the development of the region. Moreover, most towns support development of locally generated alternative energy resources that promote and increase energy independence and reliability. Lamont pf. at 4; Exh. Pet. DR-2

Discussion

GMP's significant community outreach efforts, followed by the Town of Lowell's nearly 3-to-1 margin of approval of the Project indicates that the surrounding community views it as part of the orderly development of the region. The Project is also consistent with the NVDA Regional Plan guidelines that specifically defer to local community prerogatives on development. The commercial and industrial development in the area will be minimal and acceptable under the NVDA guidelines. Likewise, the Project does not have an adverse impact on the orderly development of other towns within a ten-mile radius.

2. 30 V.S.A. § 248(b)(2) Need for Present and Future Demand for Service

Findings

21. The Project meets a present and future demand for service. This finding is supported by findings 22 to 25 below.

22. GMP has a substantial need for new stably-priced power supply sources, primarily because the Company's two largest long-term power purchases (Vermont Yankee, and

Hydro-Quebec) expire in 2012 and 2015, respectively. These expiring sources presently provide over 75 percent of GMP's annual energy requirements, and most of the long-term price stability in our power supply portfolio. Lamont pf. at 4-5; Smith pf. at 3.

23. The Project will provide a new long-term, stable-priced source in GMP's power supply portfolio that reduces their customers' exposure to potential future increases in electricity market prices and enhances the fuel and technology diversity of GMP's power supply portfolio. Smith pf. at 4.

24. If the Project is built to its maximum potential size of 63 MW, it will generate an estimated 149,000 MWh per year. After accounting for a planned long-term sale of part of the Project's output to the Vermont Electric Cooperative, Inc. ("VEC"), GMP's share of Project output is estimated at about 130,409 MWh per year, or about 6.5 percent of the Company's current annual energy requirements. Smith pf. at 3-4.

25. The Project's output is needed to serve the projected needs of GMP's customers that could not otherwise be provided in a more cost-effective manner through alternative power supply sources, energy efficiency, load management, or other demand-side measures. Lamont pf. at 5; Smith pf. at 4.

Discussion

The Project addresses both current and future demand for service by providing up to 149,000 MWh per year. This output is essential to meeting demand because of the potential expiration of GMP's long-term power purchase agreements with Vermont Yankee and Hydro Quebec in 2012 and 2015 respectively. The Project will serve the needs of customers in the most cost-effective manner available to GMP.

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

Findings

26. The Project will not have an undue adverse impact on system stability and reliability, provided the condition set forth below is met. This finding is supported by findings 27 to 31 below.

27. The operation of the Project will require that an interconnection with the electric system be developed that will not adversely affect system stability and reliability. Exh. GMP-DPS-1.

28. Central Vermont Public Service Corporation ("CVPS") is the owner and operator of an adjacent electric distribution and transmission system that may be affected by the interconnected operation of the Project, under certain contingencies. Exh. GMP-DPS-1.

29. The Project is currently participating in the interconnection process administered by ISO-NE but, as of this date, a system impact study for the proposed interconnection has yet to be completed. Exh. GMP-DPS-1.

30. GMP and the Department entered into a Memorandum of Understanding ("MOU") designed to insure that the Project will not have an undue adverse impact on system stability and reliability. Exh. GMP-DPS-1.

31. Provided the terms of the MOU are adhered to, the Project will not have an undue adverse impact on system stability and reliability. Tr. 2/23/11, 115-16 (St. Peter); Exh. GMP-DPS-1.

Discussion

While Petitioners have not yet provided final documentation demonstrating that the Project will not have an adverse impact on system stability and reliability, the Department is satisfied that if the terms of the MOU are adhered to, the Project will not have an undue adverse

impact on system stability and reliability. The Department recommends the following condition as a basis for affirmative finding under criterion (b)(3):

GMP shall comply with the terms of the MOU entered as Exh. GMP-DPS-1.

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

Findings

32. The Project will result in an economic benefit to the state and its residents. This finding is supported by findings 33 to 44 below.

33. The project will provide economic benefits to the state and its residents by job creation, additional tax revenues, lease payments, and payments associated with the Good Neighbor Fund to neighboring towns. Becker pf. at 2.

34. The project will entail an investment upwards of $150 million that will create significant jobs during the construction period. The jobs created during construction are typically higher paid skilled labor positions. In addition to the wages paid during construction, there are the secondary effects of local spending for meals and lodging and associated rooms and meal taxes while the construction workers are in the area for the project construction period. When the project is in operation, the Petitioner expects up to three fulltime employees working at the site. There will also be economic benefits associated with the project during its life in addition to the three fulltime workers, as expenditures for monitoring, maintenance, and repair of the facility will be required to keep the facility in proper working order. It is reasonable to assume there will be additional indirect economic benefits related to the jobs created as the result of this project. Becker pf. at 2-3.

35. The project will make sizeable property tax payments during its expected life. Based on

32 V.S.A §5402c, the project's education property tax payments are calculated based on the project's annual output in kWh multiplied by a tax rate of $.003/kWh. The project is estimated to produce 149,378,508 kWh annually, multiplied by $.003; this equals $448,136 in education property tax payments annually, a total of $11,203,388 in education property tax payments over the life of the project. Becker pf. at 3.

36. In addition to the education property tax payments, the project will make minimum annual payments to the Town of Lowell ("Lowell") starting at $535,000 if the full 63 MW project is built, which is to increase $32,500 every five years regardless of the project size. These annual payments will supplement the municipal property tax payments from the project, and will be calculated based on a Fair Market Value ("FMV") formula that has been agreed to between GMP and Lowell. The annual supplemental payment and the municipal property tax payments will equal the minimum annual payment agreed to between GMP and Lowell. However, if the municipal property tax payments are greater than the minimum annual payments, then GMP will pay the municipal property tax payments only. Assuming the minimum payment starting at $535,000 per year and escalating every five years per the agreement, this provides for payments to Lowell of $15,000,000 over the 25 year life of the project. These payments represent an economic benefit to Lowell. Lowell has an annual Town budget of approximately $420,000. These payments to Lowell should allow it to significantly reduce the municipal tax payments from the Town's property owners. This should provide more disposable income among the Town's residents and businesses, adding to the economic benefits from the project. Becker pf. at 3-4.

37. The Petitioners have proposed a Good Neighbor Fund that will provide payments to

neighboring towns based on one tenth of one cent for each kWh produced for the first ten years of the project's life. The payments will be made to the Towns of Albany, Eden, Craftsbury, Irasburg, and Westfield. These towns are located within a five mile radius of the project, and the payments will be allocated based on the towns' acreage located within the five mile radius. The payment will be based on actual production, and the maximum payment to the towns would be $160,055 annually for ten years, and the minimum annual payment will be at least $10,000 per town. Assuming the project achieves expected output, the five towns will share $160,055 annually for ten years for a total of $1,600,550 over the eligible payment period. These payments represent an economic benefit to the recipient towns. Becker pf. at 4.

38. In securing necessary rights to build and operate the project, the GMP has entered into lease payment arrangements with several landowners. The lease payments represent an economic benefit to these landowners. The actual amounts of the lease payments to the landowners are confidential, but they represent an economic benefit to the recipients. Becker pf. at 4.

39. GMP anticipates hiring up to three fulltime workers at the site. It is reasonable to assume that these new employees will not cause an undue adverse impact on Lowell to provide educational services. In addition, it is unlikely that the temporary jobs created during the construction period of two construction seasons would cause the construction workers to relocate their families during that time period. The project therefore will not place an unreasonable burden on Lowell to provide educational services that would erode the economic benefits the town will receive from this project. Becker pf. at 4.

40. GMP has entered into an agreement with Lowell to provide free fire and rescue training

to the town's emergency responders. The agreement also calls for GMP to provide at its expense specialized safety equipment such as climbing harnesses and equipment that is capable to gain access to the project site during winter months. GMP has agreed to pay for any damage to the town's roads or other infrastructure that is caused by GMP or their construction contractors during construction and operation of the facility. In addition, GMP states in testimony that the on-site private roads will be maintained by GMP, and waste disposal from the site will be handled by local private waste haulers. The Project will not place an unreasonable burden on Lowell to provide municipal and government services that would erode the economic benefits the town will receive from this project. Becker pf. at 5.

41. While a town or county-wide measureable decrease in property values is unlikely, one cannot draw the same conclusion about the properties located closest to the Project. However, using conservative assumptions regarding the potential decrease in property values within a three mile radius of the Project, it still provides an economic benefit to the state. Becker pf. at 6-10.

42. The net present value ("NPV") of the benefits from the education property tax payments, annual payments to Lowell, and the Good Neighbor Fund payments is approximately $10.8 million. If it is assumed that all of the properties within 3 miles of the Project are devalued by 10%, this would result in approximately $5.6 million reduction in property values. Using this conservative assumption as to devaluation, the Project still provides approximately $5.2 million in net benefits.

43. The price of the power from the Project as seen by ratepayers is reasonably in line with predictions of power costs developed for market based alternatives over the life of the

project and certainly competitive with costs seen from other renewable sources as shown in recent RFP solicitations. Since the units have no stack emissions, specifically carbon dioxide, they provide some protection in the event of further escalation in the cost of carbon resulting from Federal climate legislation or an expansion of the Regional Greenhouse Gas Initiative ("RGGI") program. Finally, since the plant is owned by GMP, it has the potential for life beyond its anticipated economic life through repowering. All of these factors serve to provide economic benefit to Vermont. Lamont pf. at 7.

44. The Project will qualify as a new renewable project under the Renewable Energy Credit ("REC") rules adopted by most states in New England. Currently, Vermont does not require its utilities to retain RECs to demonstrate compliance with any type of Renewable Portfolio Standard ("RPS"). So at least in the short term, the RECs represent a product that can be sold into the market and used to offset other costs from the project, lowering the effective cost to ratepayers. In the future, should Vermont alter its requirements regarding renewable energy, the RECs produced by the project presumably can be used to meet those requirements. Lamont pf. at 8.

Discussion

The Project will result in an economic benefit to the state and its residents. The Project will result in increased annual property tax revenues to the Town of Lowell as well as the State of Vermont. The Good Neighbor Fund will generate revenues for the Towns of Albany, Eden, Craftsbury, Irasburg, and Westfield. The Project will also generate both short and long-term employment opportunities. Even if conservative assumptions are applied as to potential devaluation of real estate within 3 miles of the Project, the Project will result in a net economic benefit to the State. In addition, as a renewable resource, the Project will provide an economic

benefit should carbon emissions become subject to additional legislation, and the RECs produced by the Project provide an economic benefit.

5. 30 V.S.A. § 248(b)(5) aesthetics, historic sites, air and water purity, the natural environment and the public health and safety.

Findings

45. The Project will not have an undue adverse impact on air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. §§ 1424a(d) and 6086(a)(1) through (8) and (9)(K).[3] The Project will have an undue adverse aesthetic impact on a small but significant number of people, but the overall societal benefits of the Project outweigh those impacts.

Aesthetics

46. The Project will have an undue adverse aesthetic impact on a small but significant number of people. However, the overall societal benefits of the Project outweigh those impacts. This finding is supported by findings 47- 69 below.

47. The Project will consist of 20-21 turbines, each with a capacity of 2.5-3.0 MW and an aggregate capacity of up to 63 MW, to be located atop the Lowell Mountain Ridgeline. Depending on the design ultimately chosen, the proposed turbines range in total height from 410 feet (125 meters) to 459 feet (140 meters) from ground elevation at the base of the turbine to the tip of a blade at its highest position. The towers supporting the nacelle

[3] Under 30 V.S.A. § 248(b)(5), the Department will address the issues of public health and safety, aesthetics, municipal services, and impact on public investment. The DPS anticipates that the Agency of Natural Resources will present the State's position on the environmental and natural resources criteria under this subsection and the Vermont Division of Historic Preservation will present the same regarding the Project's impacts on historic resources.

and rotor assemble are 262 feet (80 meters) to 279 feet (85 meters) tall. The rotors are 295 feet (90 m) to 367 feet (112 m) in diameter. Pughe pf. at 5-6; Exh. Pet. CP-1; Pughe reb. at 2.

48. Lowell Mountain, with a peak elevation of around 2640 feet, is a prominent north-south oriented ridgeline within the center of the landscape. The western portion of the landscape, including the Towns of Lowell, Eden and Westfield are within a narrow valley, with the peaks of the northern Green Mountains forming the western boundary. The character of this portion of the landscape is rural, with most land forested and a relatively undulating topography. Kane pf. at 5-6.

49. Route 100 provides north-south access through this area. The eastern portion of the landscape, including the Towns of Irasburg, Albany and Craftsbury, is generally more open with more traditional village settlement patterns. The terrain, as part of the Vermont Piedmont physiographic region, is generally lower in elevation, but steadily rises to the east as it approaches the Northeast Highlands. Route 14 provides the main roadway connection in this portion of the landscape. The northern and southern ends of the landscape feature more varied and generally forested terrain with low overall population density. Kane pf. at 6; Exh. DPS-MK-2, Figures 1-5.

50. Because Lowell Mountain is so prominent within its landscape, it commands a relatively large viewshed. The viewshed of the project could be as large as 25% of the overall land area within 10 miles of the project. The exact delineation of the viewshed is difficult given the important role that foreground screening (i.e. trees, structures, small terrain features) has on visibility. The areas east of the ridgeline appear to have a higher probability for views, because of its less topographically varied and more open terrain.

Kane pf. at 6-7; Exh. DPS-MK-2, Figures 6 - 8.

51. Areas of high visibility are highly correlated to large stretches of major roadways (Route 100 and 14) and areas of recreational use (Tillotson Camp and Belvidere Fire Tower on the Long Trail, VAST trails and the Catamount Nordic Trail). Visibility from areas in and around the Tillotson Camp site would allow the entire project to be seen. Kane pf. at 8-9; Exh. DPS-MK-2, Figure 12.

52. The area east of Lowell Mountain within portions of Lowell and Albany along and adjacent to the Bayley Hazen Road is the area most directly and significantly impacted by the project. This location is in close proximity (within 3 miles) of the ridgeline and has areas of open land with potentially direct views. Kane surreb. at 4; Exh. DPS-MK-SUR-1.

53. The area east of Lowell Mountain within portions of Lowell and Albany along and adjacent to the Bayley Hazen Road has a low residential population. The actual number of residences in this area that may have visibility of the some portion of the project during the course of their day could be as high as 120. It is likely that residents in this area will have frequent views of the project in and around their properties and as they travel to/from their homes. It is not likely that they will go about their daily lives oblivious of the project because trees or an intervening hillside block their western facing windows. The project will become part of the visual fabric within this community. Additionally, this residential population is augmented with snowmobilers, hikers and Nordic skiers. Kane surreb. at 5.

54. While some of the private residences are within wooded settings and have other structures (barns, garages, and neighbors) or have small topographic changes that may

reduce potential visibility, others have more open views of the ridgeline and project. When the ridgeline is visible, it is the background element. The project will be clearly visually dominant from this relatively short distance away. Kane surreb. at 10; Exh. Pet.-DR-2, Appendix 9D (Revised)).

54. In areas beyond about 3 miles, the ability of the project to "shock or offend" is diminished, not only by local obstruction, but more so by distance; the presence of other elements in the landscape; and the presence of multiple focal points to which the eye is drawn. Kane surreb. at 10.

55. The current local (Town of Lowell) and regional (Northeastern Vermont Development Association or NVDA) plans contain language that is general in nature and seeks to promote good stewardship of scenic resources without identifying specific actionable standards. The project does not violate a clear, written community standard. Kane pf. at 12.

56. Some of the wind turbines will have Federal Aviation Administration ("FAA") required night-time flashing red lights mounted on the nacelle, which is the unit at the hub of the turbine's blades that houses the generator, gearbox and other operational equipment. Based on the proposed layout of turbines, it is anticipated that 9 lights will be required. Pughe pf. at 6.

57. The Obstacle Collision Avoidance System ("OCAS") is a radar system that detects in-bound aircraft that will pass within a specified distance of the Project and then turns on the FAA lights (at night only) and broadcasts a radio warning to pilots. Pughe reb. at 5. The OCAS system has been approved by the FAA for use in North America. *Id.* GMP has located a suitable location for the installation of the OCAS system, but needs FAA

approval to install the system. Tr. 2/3/11 at 51-52 (Pughe). As of February 3, 2011, GMP had not applied for a permit from the FAA. Tr. 2/3/11 at 83-84 (Pughe).

58. If the project includes an OCAS system, that system provides reasonable and effective mitigation for visual impacts from the lights. Kane surreb. at 11.

59. Other potential means of mitigating the visual impacts of the project would be through reducing the height, moving turbines to the west, additional setbacks or a combination thereof. Kane pf. at 13.

60. The Lowell Mountain project site has significant environmental and engineering constraints that preclude movement of turbines to the west. A combination of bear-scarred trees (indicative of bear habitat), wetlands, and steep grades seem to limit the flexibility of the site to adapt to design modifications intended to reduce visual impacts. It clearly is not reasonable to shift impacts from one environmental resource to another, particularly when other environmental resources are regulated (i.e. wetlands and habitats) by other state and federal agencies. Kane surreb. at 12.

61. Mitigation must also consider engineering requirements. It appears that the terrain on the western flank of Lowell Mountain is quite steep and movement of turbines in that direction may result in more impacts because of the grading necessary to create sufficiently flat pads on which to place the turbines. Kane surreb. at 12.

62. The Lowell Mountain site also does not appear to allow breaking up the array into two distinct clusters. Petitioners do not control land further to the north or south which would allow the array to be meaningfully separated. It also appears that given the spacing between turbines (needed, in part, to reduce intra-turbine turbulence) the removal of a single turbine would not result in significant separation to promote a clustered

appearance. It seems that a large number of turbines would have to be removed (perhaps 3) in order to create a meaningful separation between clusters. Such a reduction may go beyond reasonable if it is not financially supportable. Kane surreb. at 12.

63. Any reduction in turbine height, while potentially helpful, does not significantly alter the relative scale of the project with respect to viewers, particularly those in close proximity. Kane surreb. at 12.

64. The Petitioners have examined the cost and technical effectiveness of moving the overhead transmission line underground, but has concluded that such a move is cost-prohibitive. The Petitioners have also suggested that the understory of the transmission right-of-way may be allowed to grow up with moderately tall vegetation. This mitigation is reasonable and will, over time, reduce the visual impact created by the clearings. Kane surreb. at 12-13.

65. The principal benefit associated with this project is its production of carbon free renewable electricity for GMP customers. Lamont surreb. at 2.

66. This project will serve to meet a portion of Vermont's goals to produce 25 percent of the energy consumed within the state through the use of renewable energy sources and to assure that 20 percent of total statewide electric retail sales before July 1, 2017 shall be generated by SPEED resources. Lamont pf. at 5.

67. The Legislature has a strong desire to see Vermont employ more renewable energy systems. The near term technologies able to do so in utility scale quantities are wind and biomass. The least cost option is wind. Lamont surreb. at 5.

68. Wind, by its nature, must be sited in visually prominent areas, and while projects should be designed to minimize such impacts, they cannot be eliminated entirely. In setting their

goals, policy makers have made at least some judgments regarding the impacts of renewable technologies, and found them acceptable given the perceived benefits to be derived from their deployment. Lamont surreb. at 5-6.

69. In both the Department's current 20 year electric plan and the draft comprehensive plan, strong support is given to renewables as a means to curb carbon emissions in the electric sector and to electrification – particularly in the transportation sector – as a means to reduce vehicle carbon (and other) emissions. The Department's outreach efforts showed a strong preference among the general public for renewable energy sources. Lamont surreb. at 6.

Discussion

The Public Service Board has adopted the Environmental Board's *Quechee* analysis for guidance in assessing the aesthetic impacts of projects proposed under Section 248.[4] In determining whether the Project will have an undue adverse effect on the aesthetics of an area, the Board employs the two-part test first outlined by the Vermont Environmental Board in its *Quechee* decision,[5] and as further defined in later decisions.

Under *Quechee*, a determination must first be made as to whether a project will have an adverse impact on aesthetics and the scenic and natural beauty. To have an adverse impact, a project must be out of character with its surroundings. Specific factors considered in this

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[4] *Petitions of Vermont Electric Power Company, Inc. and Green Mountain Power Corporation for a Certificate of Public Good authorizing VELCO to construct the so-called Northwest Vermont Reliability Project, said project to include: (1) upgrades at 12 existing VELCO and GMP substations located in Charlotte, Essex, Hartford, New Haven, North Ferrisburg, Poultney, Shelburne, South Burlington, Vergennes, West Rutland, Williamstown, and Williston, Vermont; (2) the construction of a new 345 kV transmission line from West Rutland to New Haven; (3) the construction of a 115 kV transmission line to replace a 34.5 kV and 46 kV transmission line from New Haven to South Burlington; and (4) the reconductoring of a 115 kV transmission line from Williamstown, to Barre, Vermont*, Docket 6860 Order of 1/28/05 at 79-80.

[5] *Quechee Lakes Corporation*, #3WO411-EB and 3WO439-EB, January 13, 1986.

evaluation are the nature of the project's surroundings, the compatibility of the project's design with those surroundings, the suitability of the project's colors and materials with the immediate environment, the visibility of the project, and the impact of the project on open space.[6]

Assuming a project is deemed to have an adverse impact, the next step in the two-part test is to determine whether the adverse impact is also "undue." The adverse effect is considered undue if any of the following three questions is answered in the affirmative:

1. Does the project violate a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area?

2. Have the applicants failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the project with its surroundings?

3. Does the project offend the sensibilities of the average person? Is it offensive or shocking because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area?[7]

However, the Board's assessment does not end with the results of its analysis under *Quechee*. The Board's assessment of the impacts of a particular project is "significantly informed by overall societal benefits of the project."[8]

Part One: Adverse Impact

The Project will have an adverse impact on the aesthetics and the scenic and natural beauty of the surrounding area because the presence of large commercial wind turbines on a broad ridgeline visible from public vantage points is incompatible with its relatively intact

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[6] Docket 6860, Order of 1/28/05 at 79-80.

[7] *Id.* at 80 (citing *In re Petition of Tom Halnon*, CPG NM-25, Order of 3/15/01 at 10–11 ("*Halnon*").

[8] *Id.* (quoting *In Re: Northern Loop Project*, Docket 6792, Order of 7/17/03 at 28 ("*Northern Loop*").

surroundings.[9]

Part Two: Undue Impact

The Project does not violate any clear, written community standards.

Assuming the OCAS system is installed, the Petitioner has also taken all reasonably available mitigating steps to improve the Project's harmony with its surroundings.

Average persons within the area in and around Bayley Hazen Road heading west from Albany will be shocked or offended by this project.10 Therefore, the project has an undue adverse aesthetic impact on people in this area.

Part Three: Overall Societal Benefit

As noted above, the Board's determination regarding aesthetic impacts is "significantly informed by overall societal benefits of the project." *Northern Loop* at 28; *see also In Re: Petition of EMDC, LLC, d/b/a East Haven Windfarm* ("*East Haven*"), Docket 6911, Order of 7/17/2006 at 103, n.125.

In *East Haven*, the Hearing Officer found that the proposed wind farm would have an undue adverse impact on people viewing the project within the former Champion Lands. *Id.* at 54-56. Notwithstanding this finding, the Board ruled in favor of the project:

> We do not dispute the Hearing Officer's determination that the turbines would be shocking and offensive to *some* of the public users of the Champion Lands. However, we are convinced that those users are quite small in number, and that when the overall benefits and impacts of the proposed Project are considered, the turbines would not have an unacceptable impact on the conserved Champion Lands.

Id. at 103, n.125 (emphasis in the original).

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[9] Kane surreb at 12.

10 Kane surreb at 12; .DPS-MK-SUR-1.

The Department believes that the Board should reach the same conclusion in this matter. While the number of individuals who will be unduly adversely impacted by the project is likely higher than the number of people impacted in *East Haven*, the societal benefits of the renewable energy produced by this 63 MW project are greater than the benefits that would have been provided by the 6 MW project at issue in *East Haven*.[11]

This recommendation is not made lightly. The Department has not previously recommended approval of a wind project that it believes will have an undue adverse aesthetic impact. However, as the Board noted in its first decision approving a wind farm in Vermont:

> [I]f the state is to develop wind generation as a renewable resource, these types of projects must be located at these very visible, high elevations to capture sufficient wind energy to make then viable economically. We must, then, be willing to allow some intrusion into the visual landscape to be able to reap the benefits of this type of renewable energy. This proposal very clearly brings out the reality that, in terms of our energy choices, all have some significant costs to society.

In re: Petition of Green Mountain Power, Docket No. 5823 ("*Searsburg*"), Order of 5/16/96 at 28. Since the *Searsburg* decision, the Vermont legislature has explicitly supported additional development of renewable resources including wind.

The Department recommends the following conditions be imposed by the Board for any CPG issued for the Project:

All turbines towers will be painted white or off white.

The OCAS system must be installed prior to operation.

Public Health and Safety

A. Noise

11 Tr. 2/23/11 at 141 (Lamont).

70. Noise from the Project will not have an undue adverse impact on public health and safety, provided the conditions set forth below are applied. This finding is supported by findings 71 to 80 below.

71. Other than extended concrete pours, wind turbine erection and similar events, major construction is expected to take place during normal business hours. Aside from road construction, these activities will take place well away from the nearest residence and thus will have a minimal impact on noise levels.

72. The Project is designed to meet the Board 45 dBA (exterior) (Leq) (1hr) precedent standard, established in the Deerfield and Sheffield dockets, at all residences. Kaliski pf. at 4.

73. Prior to filing the Petition, two types of modeling were conducted by Petitioners: one using worst-case meteorology and one using one year of hourly meteorology. Both types of modeling showed that the Board precedent of 45 dBA, the World Health Organization ("WHO") eight-hour sleep disturbance guideline of 45 dBA averaged over the night, the 40 dBA annual nighttime average WHO Europe sleep disturbance guideline, and U.S. EPA 45 dB Ldn guideline will be met at all residences. Kaliski pf. at 4; Exh. Pet.-KHK-2.

74. Subsequent to filing the Petition, the Petitioners performed modeling for several turbines that were not subject to the initial modeling. The worst-case levels for two of the turbines, the Siemens SWT 3.0 101 and Vestas V112, exceeded the 1-hour 45 dBA Leq Board standard. Kaliski reb. at 26; Exh. Pet.-KHK-2 (Supplemental).

75. The SWT 3.0 101 can be supplied with an electronic system that puts the turbine into noise reduced operation ("NRO") mode. The system can be set to go into an NRO

automatically based on a predesigned algorithm based on time of day, wind speed, wind direction, and other supervisory control and data acquisition ("SCADA") parameters. Modes that reduce noise by 1 to 4 dB are available. One scenario that would work to meet the standard would be to put turbines 11 through 18 in a 3 to 4 dB NRO mode and turbines 1 to 5 in a 2 to 3 dB NRO mode during specified meteorological and operating conditions. Most of these NRO periods would occur at night. Similar to the SWT 3.0-101, the Vestas V112 would need to go into NRO mode during specified meteorological conditions. The same turbines as above would be affected, but NRO modes of 1 to 2 dB would only be required due to the lower overall noise impacts of the V112. Kaliski reb. at 27; Exh. Pet.-KHK-2 (Supplemental).

76. NRO mode could be triggered on a daily basis if the SWT 3.0-101 or the Vestas V112 is selected and as many as 2000 times per year if the SWT 3.0-101 is selected. Tr. 2/22/11 at 211 (Kaliski).

77. Low frequency sound from wind turbines has been shown to cause annoyance in approximately 5% of the affected population. McCunney pf. at 6-7; Tr. 2/11/11 at 19-20 (McCunney). A recent peer-reviewed study concluded that "there is an urgent need for more research directly addressing the physiological consequences of long term low level infrasound exposures on humans." Tr. 2/11/11 at 31. (McCunney); Exh. DPS-Cross-5.

78. Protracted annoyance from exposure to noise may undermine coping and progress to stress related effects. The main health effect of noise stress is disturbed sleep which may lead to other consequences. Tr. 2/11/11 at 21-22. (McCunney); Exh. DPS-Cross-3.

79. The World Health Organization considers annoyance a critical health effect. Tr. 2/11/11 at 25 (McCunney); Exh. DPS-Cross-4.

80. The Board's current standard of 45 dBA (exterior) (Leq) (1hr) is sufficient to protect human health, though the WHO Europe standard of 40 decibel nighttime average sound level is also protective, and yearly averages are considered a better indicator of exposure in the field of public health. Tr. 2/23/11 at 77-78 (Irwin).

Discussion

Provided appropriate standards are imposed on the Project, the noise generated by the turbines will not create an undue, adverse impact on the public health and safety. There will be a temporary increase in ambient noise during the construction phase and Petitioners will take reasonably practicable mitigation measures to minimize impacts on the surrounding area. The isolation of the Project site from the nearest residences will help attenuate the effects of the construction-related noise.

The Department is concerned with the predicted frequency of NRO for the Siemens SWT 3.0 101 and Vestas V112 turbine models. While the NRO mode should enable the turbines to meet the Board's standard, frequent use of NRO mode could impact efficient operation of the Project. For that reason, the Department recommends that the Petitioners report on usage of NRO mode such that the impact of NRO mode on production can be documented.

The Department recommends the Board impose the following conditions if it issues a CPG for the Project:

> Blasting shall be minimized to the extent reasonably practicable and shall be performed only during regular business hours.
>
> Petitioners shall construct and operate the Project so that it emits no prominent discrete tones pursuant to the American National Standards Institute (ANSI) standards at the receptor locations, and indoor sound levels at any surrounding residences do not exceed 30 dBA(Ldn).
>
> Prior to construction, Petitioners shall prepare a Noise Monitoring Plan, subject to

review by the Department and approval by the Board, which is consistent with the Plan recently approved by the Board in Docket 7156, but which extends from construction through the first two years of operations and which also includes monitoring for low frequency sound with the same regularity as monitoring for all frequencies. Noise monitoring events should be timed to coincide with those time periods when Petitioners' modeling indicates the likelihood that noise reduced operational ("NRO") mode will be triggered, and monitoring reports should document every instance when NRO mode is triggered, with a description of how NRO affected operations.

In the event noise from the Project exceeds the maximum allowable noise levels, Petitioners shall cease operation of the turbine or turbines which are the source of the violation and shall take remedial steps to bring the turbine(s) into compliance with the noise standards. In the event Petitioners are unable to correct the problem, the offending turbine(s) will be subject to decommissioning review.

B. Shadow Flicker/Ice Throw/Blade & Turbine Failure

81. Shadow flicker, ice throw and blade and turbine failure from the Project will not have an undue adverse impact on public health and safety, provided the conditions set forth below are applied. This finding is supported by findings 82 to 88 below.

82. Shadow flicker is defined as the modulation of light levels resulting from the periodic passage of a rotating wind turbine blade between the sun and a viewer. None of the 89 identified nearby dwellings are predicted to experience shadow flicker in excess of either 30 hours per year or 30 minutes per day, which are commonly used benchmark durations for the shadow flicker effects. LeBlanc reb. at 2; Exh. Pet.-ML-2.

83. Ice can build up on wind turbine rotor blades when appropriate conditions of temperature and humidity exist, as it will on any structure that is exposed to the elements when appropriate conditions of temperature and humidity exist. When a wind turbine is stationary, it is no more likely to suffer from ice accretion than a large stationary structure such as a building, tree or power line. Similar to such structures, accreted ice will eventually be released and fall directly to the ground. Exh. Pet.-ML-3.

84. There is evidence to suggest that icing conditions may occur 23 days per year at the Project, and 25 days of icing per year is a representative assumption of the Project site conditions for icing events during operation. Exh. Pet.-ML-3.

85. The typical range of ice throw from the turbines is approximately 150 meters, and the typical range (within 90% of time) of ice drop from the turbines is approximately 45 meters. The risk of a fragment of ice dropping and landing in a square meter a distance from the turbine drops sharply for distances beyond 60 meters (in the range of the overhang of the wind turbine model). Exh. Pet.-ML-3.

86. Given the level of risk estimated within the parcels not under control of the Project from the wind turbines and that this estimate is based on several assumptions, it is prudent that a control method be employed at the Project to minimize the risk of potentially damaging ice fragments by implementing wind turbine control procedure when dangerous icing conditions are present, such that turbines which present a safety risk to the public are placed in Pause mode, in which the units are inoperative. Exh. Pet.-ML-3.

87. If control methods are implemented, only very high winds in a specific direction may cause ice fragments of any significant mass to be blown a distance beyond 60 m from the base of the turbine. At this distance, there is the probability of an ice fragment landing in any particular square meter of ground beyond 60 m to occur of once in 65,000 years. Based on an assumed 25 days of icing, the probability of an ice fragment striking a stationary person located at 60 meters and present for all icing events is once in 10 years. Exh. Pet.-ML-3.

88. Should a blade failure occur, experience shows that, with modern design and manufacturing techniques, it is much more likely that most parts of the damaged blade

will remain attached to the turbine rather than detaching. The probability of tower failure during the operational lifetime of a certified turbine is considered to have lower probability than blade failures. If the site conditions are within the design certification parameters and a suitable operation and maintenance program is in place, the probability of turbine structural failure during the operational lifetime for sparsely-populated areas is almost certainly on a par with natural hazards. LeBlanc reb. at 4; Exh. Pet.-ML-4.

Discussion

Provided appropriate standards are imposed on the Project, risks from shadow flicker, ice throw and turbine or blade failure will not create an undue, adverse impact on the public health and safety.

The Department recommends the Board impose the following conditions if it issues a CPG for the Project:

> Prior to operation, Petitioners shall prepare an Icing Mitigation Plan, subject to review by the Department and approval by the Board, which sets forth the protocols used to determine whether turbines present a safety risk to the public from icing and the procedures used to place those turbines in Pause mode, in which the units are inoperative.

C. Blasting

89. Blasting from the Project will not have an undue adverse impact on public health and safety, provided the conditions set forth below are applied. This finding is supported by finding 90 below.

90. A significant portion of the Project will be built in areas with shallow depths to ledge. Blasting will be required in those areas to create the material necessary to build the access roads and crane paths. The final project blasting plan will be completed by the contractor after the appropriate geotechnical investigations and landowner notifications

are complete. Jewkes pf. at 16.

Discussion

Provided appropriate standards are imposed on the Project, risks from blasting will not create an undue, adverse impact on the public health and safety.

The Department recommends the Board impose the following conditions if it issues a CPG for the Project:

> Blasting associated with construction of the Project shall be minimized to the extent practicable and performed only during the hours of 9:00 AM-5:00 PM Monday-Friday, with the exception of state holidays.
>
> All blasting shall be carried out by licensed and certified blasting technicians. All blasting shall be performed in accordance with any and all applicable laws and regulations, including, but not limited to, U.S. Department of Interior Rules 816.61-68 and 817.61-68 and the Blasting Guidance Manual, Office of Surface Mining, Reclamation and Enforcement, U.S. Department of Interior, to limit peak particle velocity and ground vibration to sage levels. Noise and air blast effects shall be limited through application of proper techniques and blasting mats shall be used where needed to limit the occurrence of flyrock.
>
> Prior to performing any blasting for the Project, Petitioners shall develop a blasting plan that includes pre-blast surveys of wells and structures in the surrounding area and shall arrange for a public information session with surrounding landowners to address concerns related to blasting.
>
> In the event surrounding landowners express concern regarding the impacts of blasting on wells or other structures on their property, Petitioners shall remediate any damage caused by blasting activities.

Transportation Systems

91. Provided that the Board imposes appropriate conditions related to the transport of Project components, the Project will not have an undue, adverse impact on the region's transportation system. This finding is supported by finding 92 below.

92. The Project will not cause unreasonable congestion or unsafe conditions with respect to the use of highways, waterways, railways, airports, or airways. All public roads will be

able to accommodate the expected volume of construction and operational traffic without creating unsafe operating conditions or excessive congestion. Adequate on-site parking for workers and staging of materials will be available at the lower staging area directly adjacent to Route 100 and at the maintenance building area. The two areas total over six acres of available parking and staging. It is anticipated that materials and components for the turbines will be delivered directly to the proposed turbine locations. Pughe pf. at 21; Exh. Pet.-CP-7.

Discussion

Based on the above finding, and provided that the Board imposes appropriate conditions related to the transport of Project components, the Project will not have an undue, adverse impact on the region's transportation system. In the event the Board issues a CPG it should include the following conditions:

> Petitioners shall submit to the Board any necessary AOT right-of-way permit(s) no less than 30 days prior to any road work approved under such permit. UPC shall also be responsible for obtaining all necessary DMV oversized load permits, and shall make them available for inspection upon request by the Board. No further action shall be required by the Board, unless the activities approved by AOT under the permit are materially different than GMP's prior representations to the Board or would materially impact any of the substantive criteria under 30 V.S.A. § 248(b).
>
> Petitioners shall develop and file with the Board a transportation plan for transport of project components and access by construction vehicles. The plan will be subject to review and comment by parties with standing on the issue and must be approved by the Board prior to the commencement of any significant vehicular traffic to the site and transport of any project components. In developing its plan, Petitioners shall account for traffic control and insure unimpeded emergency vehicle access to all areas of the Town Lowell at all times. Petitioner's plan must also address transport of turbine components and construction vehicles through Lowell streets and roads in a manner that avoids undue disruption of municipal services, local businesses and travelers during times of expected increased traffic flows, such as rush hours, holiday periods, and municipal events.

Archeological Resources

93. Provided the Project is developed in accordance with the recommendations in the archeological review conducted by the University of Vermont, the Project will not have an undue adverse impact on archeological resources. Knight pf. at 2; Exh. Pet.-CK-2.

Discussion

The Project will not cause an adverse impact on archeological resources provided the following condition is imposed in a CPG:

> Petitioners shall construct and operate the Project in accordance with all applicable recommendations contained in the archeological assessment performed by the University of Vermont.

Development Affecting Public Investments

94. The Project will not unreasonably endanger any public or quasi-public investment, nor will it materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of any such investment. This finding is based on findings 95-96 below.

95. The oldest long-distance hiking trail in the United States, the Long Trail, cuts through the western edge of the study area and over the summit of Belvidere Mountain, which is located over 6 miles away from the Project site. The Hazen's Notch Association also maintains a network of 15 miles of trails and woods roads for hiking in summer and fall, which are part of a larger network of 40 miles of trails that are maintained in winter for cross-country skiing and snowshoeing in the Hazen's Notch/Jay area. Several other trail systems can be found in the area's public parks and forests as well as private outdoor centers. Additional public investments found within the 10-mile radius of the Project site include: Long Trail State Forest, Hazen's Notch State Park, Green River Reservoir State

Park, Lowell Municipal Forest, and Wild Branch Wildlife Management Area. Other local recreational land uses, such as sports fields, playgrounds, parks, and village greens, are scattered throughout the area. Exh.-Pet.-DR-2.

96. The Project will not unnecessarily or unreasonably endanger the public or the quasi-public investments in the Projects' vicinity, nor will it interfere with the function or enjoyment of these investments. The Project does not directly abut any public investments, other than Route 100, which lies at the base of the Project site. The Project access road begins at Route 100, and an existing transmission line along Route 100 will need to be upgraded. The Project's access and necessary transmission line upgrade will not materially affect the use, safety or overall function of this public investment. Exh.-Pet.-DR-2.

Discussion

The Project will not unreasonably endanger any public or quasi-public investment, nor will it materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of any such investment. The test under this criterion is not whether there will be an impact, but whether that impact will unreasonably endanger the investment or materially interfere with the public's use and enjoyment of the investment.

There is no evidence to suggest that the Project will unreasonably endanger the public investment in any of the public lands, parks or roads surrounding the Project site. Nor is there evidence to support a finding that the Project will materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to these investments. The evidence suggests that the public will continue to have access to these locations and will be able to engage in all the permitted activities within those locations. Overall,

the impact on the public's use and enjoyment of these areas will be limited and therefore will not rise to the level of material interference.

6. 30 V.S.A. § 248(b)(6) Consistency With Least-Cost Integrated Plan

97. The Project is consistent with the principles for resource selection expressed in the Petitioners' approved least cost integrated plans. This finding is supported by findings 98-99 below.

98. GMP has indicated that they are pursuing a resource strategy that focuses on cost, carbon and reliability. The Project is a low cost source of renewable power to meet the objectives of cost and carbon. Although wind is an intermittent resource, it can be expected to provide the anticipated energy amounts on average in a reliable manner over the course of a year. In this way, the project meets the objectives outlined in GMP's IRP. Lamont pf. at 9.

99. VEC's IRP generally discusses wind as a renewable option and notes that there would likely be opportunities to pursue this resource. VEC IRP at 5-5. The PPA is consistent with this goal and will allow this new renewable resource to provide energy to VEC's system. Kieny pf. at 11.

Discussion

The generation and distribution of wind power is consistent with each of the Petitioners' Least Cost Integrated Plan.

7. 30 V.S.A. § 248(b)(7) Consistency With the Department's 20-Year Plan

Findings

100. The Project is consistent with the Department's 20-Year Electric Plan. Exh. DPS-DL-1.

8. 30 V.S. A. § 248(b)(8) Outstanding Resource Waters

Findings

101. There are no waters in the Project vicinity that have been designated as outstanding resource waters and therefore the Project will not result in an undue adverse impact under this criterion. Nelson pf. at 5.

9. 30 V.S.A. § 248(b)(9) Waste to Energy Facilities

Findings

102. The Project is not a waste-to-energy facility and this criterion is therefore inapplicable.

10. 30 V.S.A. § 248(b)(10) Existing or Planned Transmission Facilities

Findings

103. The Project can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers. This finding is supported by finding 104 below.

104. GMP has provided an analysis that demonstrates that its preferred transmission option is the least cost option. St. Peter surreb. at 4; Tr. 2/23/11 at 114.

IV. ADDITIONAL ISSUES

Environmental Attributes

105. GMP expects that absent a change in Vermont law, it will sell most or all of the Project's RECs to entities in neighboring states that will ultimately retire them for compliance with RPS requirements. For context, GMP presently sells most of the RECs associated with its premium renewable sources in this manner. Smith pf. at 25.

106. To the extent that Vermont utilities sell the RECs associated with renewable sources

like the Project, they are no longer able to claim those sources' renewable content and their low/zero emission profile. Smith pf. at 26.

Discussion

In Docket 7533, the Board is considering how best to address the issue of claims and representations regarding Renewable Energy Certificates ("RECs") and other environmental attributes. The Department has made suggestions in that docket for language to be included in Standard Offer Contracts, and for either CPGs or any potential Board rule for non-Standard Offer projects. The Department recommends that the following language be required as a condition to the CPG in this matter:

> Petitioner agrees that it will not sell any renewable energy credits (RECs) or other environmental attributes directly attributable to the Project's electrical production to more than one consumer, or make any claims regarding those disaggregated attributes in any marketing or advertising if it has sold those disaggregated attributes.

This condition meets the concerns identified by the Department in Docket 7533 pertaining to protecting consumers from misleading advertising and marketing claims regarding these products.

CONCLUSION

The Department recommends approval of the Project as set forth above and subject to the conditions set forth above.

Dated at Montpelier, Vermont, this 21st day of March, 2011.

VERMONT DEPARTMENT OF PUBLIC SERVICE

By: _____
John Beling, Special Counsel