

**THE STATE OF NEW HAMPSHIRE
SITE EVALUATION COMMITTEE**

Docket No. 2008-04

Re: Application of Granite Reliable Power, LLC

For A Certificate of Site and Facility

To Construct And Operate

The Granite Reliable Power Windpark

APPLICANT'S POST HEARING BRIEF

April 10, 2009

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I. INTRODUCTION/PROCEDURAL HISTORY

On July 15, 2008, Granite Reliable Power, LLC (“GRP” or “Applicant”), majority owned by Noble Environmental Power, LLC (“NEP” or “Noble”), filed with the New Hampshire Site Evaluation Committee (“SEC” or “Committee”) an Application for a Certificate of Site and Facility (“Application”) for the construction and operation of a renewable energy facility (“the Project”) in the Town of Dummer and the unincorporated places of Dixville, Erving’s Location, Millsfield and Odell, all of which are located in Coös County, New Hampshire. The Project is a 99 MW wind energy facility consisting of 33 wind turbines, each having a nameplate capacity of 3 MW, and associated facilities including: a new 34.5 kV electric line for the collection of electricity that will run from the turbines to a substation; a maintenance building and lay-down yard; and a new 115 kV electric line that will run from the substation to a new switching station for interconnection with the existing 115 kV electric transmission line owned by Public Service Company of New Hampshire (“PSNH”). The Project also includes the construction of approximately 12 miles of new access roads and upgrades of approximately 19 miles of existing logging roads.

By Order dated August 14, 2008, the Committee Chairman determined, pursuant to RSA 162-H:6-a, II, that the Application contained sufficient information to carry out the purposes of RSA 162-H pertaining to renewable energy facilities. The Order also accepted the Application and designated a Subcommittee pursuant to RSA 162-H:4, V to consider and either approve or reject the Application.

The Subcommittee Chairman/Presiding Officer issued an Order of Notice on August 27, 2008 establishing a deadline for intervention petitions and scheduling a prehearing conference to be held in Concord on September 18, 2009, a public information hearing to be held jointly with the U.S. Army Corps of Engineers in Groveton on October 2, 2008, and a site inspection visit at various places within or adjacent to the proposed Project on October 3, 2008.

Intervention petitions were filed by Clean Power Development, LLC, Sonja Sheldon, Wayne Urso, Kathlyn Keene, Robert Keene, John Odell, Appalachian Mountain Club, New Hampshire Wind Energy Association and Industrial Wind Action Group. On October 14, 2009, the Presiding Officer issued an order granting the aforementioned petitions and combining the participation of Ms. Sheldon with Mr. Urso, allowing them to participate as one party. Similarly, the Order combined the participation of Ms. Keene, Mr. Keene and Mr. Odell. Thereafter, the Applicant and the parties actively engaged in discovery by exchanging data requests¹ and by meeting in person during several technical sessions, some of which were held in Coös County.

On October 13, 2009, Counsel for the Public filed a motion requesting that all further hearings and proceedings in this matter be conducted in Coös County. The Applicant filed a response on October 23, 2009 noting that RSA 162-H:10, II allows the adjudicative proceedings in this matter to be conducted either in Concord or in Coös County. The Applicant's response also indicated that the Applicant recognized the importance of providing citizens in Coös County with convenient access to the adjudicative hearings in this matter, and that in the spirit of compromise it did not object to having at least one day of the adjudicative hearings in Coös County. The Applicant

¹ The Applicant provided written responses to over 400 data requests from the parties.

did, however, express concerns about possible logistical problems and expenses associated with holding several days of hearings in Coös County. By Order dated February 10, 2009, the Subcommittee partially granted Public Counsel's motion by determining that it would conduct a day of hearings in Coös County for the purposes of hearing closing arguments from the parties and taking public comment.

On February 5, 2009, Public Counsel filed a Motion to Suspend Deliberations and Proceedings and a Request for an Emergency Hearing on the Motion to Suspend. GRP filed an objection to both motions on February 9, 2009. In support of his Motion to Suspend, Public Counsel alleged that the Applicant had failed to establish a *prima facie* case with respect to its financial capability. The Applicant's objection contended otherwise and further asserted that it would be filing additional information about its financial capability in accordance with the procedural schedule that established February 23, 2009 as the deadline for all parties to file supplemental testimony. The Presiding Officer denied the Motion to Suspend Deliberations by Order dated February 10, 2009, stating that the hearings would commence on March 9th as scheduled and that in the event that the Applicant were to submit substantial supplemental testimony on financial capability, the Subcommittee would entertain a motion to allow a reasonable amount of time for parties to prepare for cross examination on such testimony.

On February 17, 2009, six days before the deadline for filing supplemental testimony, Public Counsel filed two more "Emergency" pleadings. One was a motion to obtain authorization from the Subcommittee for Public Counsel to hire a financial consultant and for an order requiring GRP to pay for that consultant. The other pleading was a request for an emergency hearing on the motion. The Applicant responded to both

pleadings on February 19, 2009 by providing several reasons why a financial expert retained by Public Counsel at such a late date in the proceedings should not be allowed to submit prefiled testimony and why a cap of \$10,000 on such expenses would be more reasonable than the cap of \$75,000 requested by Public Counsel.

On February 18, 2009, Public Counsel filed yet another "Emergency Motion" for permission to conduct additional discovery in the form of data requests and depositions on financial issues. The Applicant responded to the "Emergency Motion" on February 19, 2009 indicating that in the interest of being reasonable and trying to accommodate Public Counsel's requests for discovery after the discovery deadline had passed, the Applicant would be willing to agree to a limited number of data requests (i.e. 20) provided that they were given to the Applicant by February 27th and that they did not extend the schedule that had been in place since September 2008. The Applicant's response further stated that Applicant objected to Public Counsel's request for depositions.

On February 20, 2009, the Presiding Officer issued an Order on the Emergency Motions which granted Public Counsel's request for leave to retain a financial consultant, denied the request for depositions and ordered that an additional technical session on financial issues be held and that any data requests propounded at such session be answered within 7 days. The Order also preserved all of the other deadlines and hearing dates that had been previously established.

The technical session on financial issues was held on March 2, 2009. A final prehearing conference was held on March 5, 2009 at which time the Presiding Officer addressed with the parties the hearing schedule, order of witnesses and other procedural

matters. Thereafter, with the assistance of Subcommittee Counsel, the parties in attendance premarked their exhibits.

Adjudicative hearings were held in Concord as scheduled on March 9, 10, 11, 13, 16 and 17, 2009. Because Mr. Lloyd-Evans, a witness for Public Counsel, was not available to testify on those dates, a portion of the adjudicative hearings was held in Lancaster at noon on March 19, 2009, despite the fact that that date had originally been set aside solely for closing arguments. The duly noticed closing statement hearing was held at 3:00 p.m. in Lancaster. A duly noticed hearing for the purpose of receiving public comment was held as scheduled on the evening of March 23, 2009 at the Lancaster Town Hall. Although the session was held for the purpose of receiving comments from members of the public, some of the parties to the proceeding who had previously made closing statements, i.e. Ms. Keene and Public Counsel, also provided their opinions on the Project at the public comment hearing. In response to the March 25, 2009 Motion of Public Counsel to Recall Christopher Lowe for Additional Cross Examination, the Subcommittee issued a notice on March 31, 2009 and held an additional afternoon hearing on April 2, 2009 to address Public Counsel's concerns about mechanic's liens filed against NEP in the state of New York.

II. BURDEN OF PROOF

The Applicant bears the burden of proving facts sufficient for the Subcommittee to make the findings required under RSA 162-H:16 by a preponderance of the evidence. See N.H. Admin. Rule Site 202.19 (a) and (b). As discussed more fully below, the

record demonstrates that the Applicant has met its burden with respect to each of the findings required by RSA 162-H:16, IV.

III. SEC CONSIDERATIONS

A. Evidence and Public Comment

The Subcommittee is required to consider and weigh all evidence presented at public hearings and to consider and weigh written information presented to it by members of the public before, during and subsequent to public hearings. RSA 162-H: 10, III. Although the rules of evidence do not apply to administrative proceedings, *see* RSA 541-A:33, II, principles of fundamental fairness and common sense dictate that more weight should be given to sworn testimony presented by live witnesses who were subject to cross-examination than to unsworn written information. The Subcommittee should also accord more weight to sworn testimony presented by experts or other witnesses who are qualified to render opinions than to evidence (either sworn or unsworn) provided by lay witnesses who do not possess the background, education or experience to offer opinions on technical or scientific subject matters such as noise and other environmental issues.

There has been considerable support expressed for this Project by the public and local, county and state officials during the public hearings and in written correspondence. Members of the public at the March 23, 2009 public hearing provided some very interesting and helpful comments, including, among others, pointing out that the New Hampshire Wildlife Action Plan indicates that 87% of New Hampshire's high elevation forests are already protected by conservation ownership or easement. *Tr. Pub. St. Hring.*,

p.30:3-10.² Similarly, there were comments about the extent of lands already protected in this part of the state. *See Tr. Pub. St. Hring.*, p.35:2-37. Public comments also supported the fact that revenues from wind power will help landowners by providing additional revenue and assisting them in weathering tough economic times, and that these revenues will help to keep large tracts of land open to the public. *Tr. Pub. St. Hring.*, p.31:19-24, p.32:1-4. The Subcommittee should consider these comments and this support in making its decision.

Closing arguments are generally intended to be a summary of the evidence that has been presented during the hearing, not as evidence or testimony. Although Public Counsel in his closing argument took a position against the approval of this Project, none of the four witnesses he proffered supported this position. Messrs. Mariani and Sanford recommended certain additional construction techniques and mitigation proposals, beyond what the Applicant proposed, but did not recommend against approving the Project. Although Mr. Lloyd-Evans' prefiled testimony advocated for removal of turbines on Mt. Kelsey as mitigation for the Project's impact on breeding bird habitat, *see Exhibit PC 3*, p.9:1-3, at the hearing he conceded that the high elevation mitigation plan agreed upon among the Applicant, New Hampshire Fish and Game Department and the Appalachian Mountain Club ("AMC") was "a very reasonable attempt to do mitigation." *Tr. Day VII*, p.36:4-5. Finally, Mr. Sundstrom testified that he believed the Applicant has the financial capability to own and operate this Project. *Tr. Day V*, pp.179:9-12; p.196:11-15. In the final analysis, none of Public Counsel's witnesses recommended that the Application be denied. Public Counsel's position as articulated in his closing

² The citation format employed in this post hearing brief identifies page and line numbers, where they are available, by separating them with a colon. Thus, "2:4-5" refers to page two, lines four through five. In addition, "2:4 to 5:6" refers to page two, line four through page five, line six.

argument is not supported by the record, for the reasons described in the Applicant's closing remarks and in this post-hearing brief, and is even contravened by Public Counsel's own witnesses.

B. Available Alternatives

As part of its review of this Application, the Subcommittee must consider available alternatives, in addition to a full review of the environmental impact of the site and other relevant factors bearing on whether the objectives of RSA 162-H would be best served by the issuance of a certificate. See RSA 162-H:16, IV. "The function of the Committee regarding alternative sites is to confirm that the Applicant has reviewed alternative sites." *Application of AES Londonderry L.L.C.*, SEC Docket No. 98-02, Decision (May 25, 1999), p.11.

Under the statute specifying the standard for evaluating this Application, the Subcommittee must have "considered available alternatives" before making a determination on the Project. RSA 162-H:16, IV. As indicated in the prefiled and hearing testimony, the Application, and the exhibits, an analysis of available alternatives for a wind park involves a number of different factors and typically starts with a larger area, before focusing on more specific areas that meet certain criteria. GRP witness Mark Lyons testified that the analysis of alternatives begins with the fact that having a diverse portfolio of wind projects has value and is favored by investors and lenders, and that New England sites have particular value in this regard due to the scarcity of wind energy projects in the region. *Tr. Day II*, p.109:12-16, p.110:10-14; *see also Tr. Day V*, 121:9-23 (testimony by Mr. Wood). In addition to being an area that is attractive to investors, New England was chosen as a site for a wind park because it has favorable markets for

both electricity and renewable energy credits. *Tr. Day II*, p.109:23-24; *Tr. Day V*, pp.13:4-8, p.37:14-22, p.77:24 to 78:1, pp.86:23 to 87:1.

The original prefiled testimony of Pip Decker and Charles Readling (adopted by Mark Lyons) indicated that a successful wind power project requires three essential components: an adequate wind resource, proximity to transmission lines, and community support. Exhibit Pet.3, p.3. The supplemental testimony of Messrs. Decker and Lyons, as further clarified during the hearing, indicated the need to consider a fourth key feature, the availability of a sufficient amount of land. Exhibit Pet.4, p.5. The original Decker/Readling prefiled testimony pointed out that the wind resources in Coös County appear to be some of the best in New England. Exhibit Pet.3, p.3:20-21. They discussed how GRP obtained permits for meteorological (“met”) towers and evaluated the wind data and how the Project was to be located on private land owned by three different landowners. The original testimony also described the process of evaluating the Phillips Brook area because of the good wind resource and the history of heavy logging activity. *Id.*, p.8:13-17.

In the Application, GRP provided a description of the analysis of alternatives that it completed in the early stages of developing the Project. Exhibit Pet.1.1, pp. 55-61. That analysis began with preliminary screening in 2006 of a wide area for potential projects, and included a more focused review of a smaller project, a similar-sized project with a larger number of turbines, and various other alternatives. The Application also discussed the financial viability of the Project and the fact that wind energy projects are, by their nature, “capital intensive”, and there are significant fixed “infrastructure” capital expenditures that are independent of the size of the facility, which make a smaller project

much less financially viable. The various alternatives were rejected for several reasons: the smaller project was rejected because it would have had comparable fixed costs with reduced environmental and economic benefits; the project with more turbines was rejected because it would have had more environmental impacts with no corresponding increase in electricity output. Examples of such increased environmental impacts included: many stream crossings, longer roads, more collection lines, more turbine foundation disturbance, and closer proximity to the Phillips Brook Tract and the Nash Stream Forest. *Id.*, pp.56-57; *Tr. Day II*, p.111:32 to 112:6. The Application also discussed the no-build alternative, which would continue our region's reliance on non-renewable energy sources, and the fact that without this Project, its economic and environmental benefits such as enhancing the ability to meet the goals of the renewable portfolio standard law, RSA 362-F, would not be realized.

The Applicant submitted as Exhibit Pet. 46 the alternatives analysis GRP provided to the U.S. Army Corps of Engineers, for which the Applicant sought confidential treatment. This analysis shows a number of other sites that were considered in New Hampshire, including the site in the Nash Stream Forest (an area that was rejected because of conservation protection); another area of New Hampshire where GRP was unable to secure land rights; and a third site that was rejected because it contained numerous wetlands and streams and did not have sufficient area to install 99MW. A fourth site was rejected because it was too close to the Appalachian Trail, too difficult to access, and contained too many ponds and wetlands. Also rejected was a fifth potential site that would have been too close to one of New Hampshire's largest lakes, likely

caused unacceptable negative visual impacts and lacked community support. *See Exhibit Pet. 46.*

The GRP alternatives analysis was thorough and exhaustive, and led to the selection of one of the best sites in New Hampshire, a site that will be attractive to investors, has very good wind resources, and has available land that is privately owned and not subject to conservation. As noted in more detail below, the use of this site as a wind park is consistent with the 2006 Master Plan for Unincorporated Places in Coös County, and, because of its current and historical use for commercial logging activities, will not be inconsistent with the character and development of the region. As members of the public pointed out during the March 23, 2009 public hearing (*Tr. Pub. St. Hring. p.30:3-10, p.35:2-37*), this is a very good place for a wind park, a piece of land that is not owned by the public or subject to conservation but is surrounded by areas that are being conserved. *See* testimony of Will Staats, *Tr. Day IV*, pp.121:23 to 122:1. By approving this Project in a region that already has many protected parcels of land, and approving a project that will add significant acreage to those protected lands through the mitigation plan (i.e. permanently conserving 1735 acres above 2700 feet in elevation on Mt. Kelsey, providing \$750,000 to the Fish and Game Department with a preference for using these funds to purchase high elevation lands in Coös County, and an additional 620 acres in wetland mitigation area in Phillips Brook), the Subcommittee will be balancing environmental protection with the need for clean, renewable energy sources here in New Hampshire. *See Exhibit Pet. 48, sec.A.*

C. Environmental Impact Of The Site

RSA 162-H:16, IV provides that the Subcommittee must fully review the environmental impact of the “site or route”. The environmental impact of the Project “site” (i.e. the area encompassing the proposed locations of the turbines, access roads, collection lines, associated facilities and electric line to the point of interconnection with the PSNH system) is discussed more fully below in Section IV.G.

As the testimony shows, and as discussed more fully below, various impacts to the environment where this Project is to be built (which has been logged for about 100 years), have been thoroughly reviewed and those impacts will be fully mitigated. The plans for mitigation of high elevation areas and wetlands impact are significant. One specific example was described by Mr. Lobdell and Mr. LaFrance in response to cross-examination questions from Public Counsel concerning the proposed Mt. Kelsey staging area, an area currently covered with three of four feet of wood debris, an area where skidders have caused erosion by going up and down the adjoining slopes and where there is a disturbed stream buried under the debris. The plan for this staging area will be a “vast improvement” over what is there now. *Tr. Day III*, pp.250:7 to 252:15.

As Mr. Lobdell indicated in his supplemental prefiled testimony, GRP is proposing to mitigate the 13.5 acres of wetland impact by upland buffer preservation, vernal pool creation and restoration of perennial and seasonal stream crossings. Exhibit Pet. 12, p.2:13-15. He also described the proposed Phillips Brook Mitigation Area of 620 acres and said that the ratio of preserved area to wetland impacts is 46:1, more than four times greater than what the NH Wetlands Bureau requires (10:1) and three times greater than what the US Army Corps of Engineers requires (15:1). *Id.*, p. 7:2-14. He believes

that with the mitigation and the removal of certain tracts of land from commercial forestry, there will be a significant positive impact on wetland wildlife habitat that will more than compensate for any loss. *Id.*, pp.7:20 to 8:5.

Moreover, because there are additional unaccounted wetland areas that will be preserved as part of the High Elevation Mitigation Plan, the proposed Project would provide a net environmental benefit to this area. As GRP witness Steven Pelletier testified, the habitat value is greater with the wind park and the mitigation agreement than with no wind park and no mitigation agreement. *Tr. Day IV*, pp.17:21 to 21:5, pp.113:16 to 114:16. (“Q. . . . [W]ould you agree that, in terms of overall habitat value, the habitat value would be greater with the Windpark and the mitigation, as compared to no Windpark and no mitigation? A. (Pelletier) Absolutely.”) On balance, this Project will provide a positive environmental impact on the site and route.

D. Other Relevant Factors Bearing on Whether the Objectives of RSA 162-H Would Be Best Served by Issuing the Certificate

This Project advances one of the objectives of RSA 162-H:1 (“it is essential to maintain a balance between the environment and the possible need for new energy facilities in New Hampshire”) by balancing the impact on the environment and the need for new energy facilities. The Project as proposed balances environmental impact, of which there is necessarily some, mitigated in various and creative ways, while still providing a new, renewable energy source of electricity that will help to meet the needs for power going forward without contributing to global warming or otherwise degrading the environment.

The Legislature also found that the public interest requires that a balance be maintained between the environment “and the need for new power sources”. RSA 162-

H:1, II. This Project maintains such a balance. The Project will assist in meeting the region's demand for additional electricity, Exhibit Pet. 1.1, pp.100-102, while having limited environmental impacts that are more than mitigated, and with the environmental benefit of having no air or water emissions. Thus, the Applicant urges the Subcommittee to consider the Project's positive effects on clean air and climate change when it balances the environmental issues raised by the Project against the need for additional energy. Also, as only the second commercial wind energy facility in New Hampshire, the Project will provide the state with a new source of renewable energy that will assist in meeting the goal articulated by Governor Lynch in his January 4, 2007 Inaugural Address that "25 percent of our energy comes from renewable sources by 2025", now embodied in the state law which establishes renewable energy portfolio standards, RSA 362-F:3.

In addition to maintaining the balance between the environment and the need for new energy facilities and resources, another objective of RSA 162-H is that construction of needed facilities and electric power supplies must occur on a timely basis. *See* RSA 162-H:1, I and II. The Project meets that objective because it can be constructed within a relatively short time period. *See* Exhibit Pet. 1.1, pp. 44-49. Particularly in the ISO-New England control area, other types of power plants have longer construction periods than wind plants. Thus, given the short construction period for this type of facility, it clearly meets the "undue delay" objectives of RSA 162-H.

Lastly, because the Project will assist with providing the state with an adequate and reliable supply of electric power in conformance with sound environmental utilization, it will further the objectives of RSA 162-H. Estimates of the Project's potential capacity factors have been calculated appropriately and conservatively, and

indicate that the Project will produce a significant amount (i.e. 300,000 MWH or the amount needed to serve approximately 40,000 households annually) of emission-free, fuel-free energy for use in the local and regional areas. See Exhibit Pet.1.1, pp. 43-44.

IV. REQUIRED FINDINGS/STATUTORY CRITERIA

A. The Applicant Possesses Adequate Financial, Technical and Managerial Capability

RSA 162-H:16, IV(a) requires that the Subcommittee find that the Applicant has adequate financial, technical and managerial capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of the certificate. Ample record evidence exists to support these findings. The Application and Supplement to the Application (Exhibit Pet. 1.1, pp.62-65; Exhibit Pet. 2.1, pp.3-4), prefiled testimony (Exhibits Pet. 5, 6, 7 and 8) and hearing testimony of Messrs. Lowe, Wood, and Mandli, testimony of Public Counsel's witness James Sundstrom, and responses to various data requests, including Exhibit Pet. 29, clearly demonstrate that GRP, through its relationship with NEP, possesses the requisite financial, technical and managerial capability to build and operate the proposed Project. Precedent exists to permit a limited liability company such as GRP to rely on the financial, managerial and technical experience of its corporate affiliates and parents to satisfy the above-stated statutory criteria. See, e.g. *Application of Newington Energy, L.L.C.*, SEC Docket No. 98-01, Decision (May 25, 1999), pp. 11-12; *Application of AES Londonderry L.L.C.*, SEC Docket No. 98-02, Decision (May 25, 1999), pp.11-13; and *Application of Lempster Wind, LLC*, SEC Docket No. 2006-01, Decision (June 28, 2007), pp. 21-23. Therefore, it is entirely appropriate in this application process that GRP rely on the substantial

financial, technical and managerial resources of its majority member as described in greater detail below.

1. Financial Capability

GRP and NEP have clearly demonstrated adequate financial capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of the certificate. Public Counsel's witness James Sundstrom, hired specifically to evaluate the financial capability of the Applicant, testified twice in the record that he believes the Applicant has demonstrated the capability to undertake a large project financing and financing for this Project. *Tr. Day V*, p.179:7-12, p.196:2-15. Christopher Lowe, Chief Financial Officer of NEP, and Jeffrey Wood, Senior Vice President, Project Finance for NEP, two members of NEP's management team with significant experience in financial markets and project financing of wind power and other projects, demonstrated this capability through their testimony about the experience that NEP has in bringing NEP's seven other projects to completion and obtaining financing for them. *Tr. Day V*, pp.103:7-21.

Noble has undertaken and completed project financings before and is fully capable of executing one for this Project. It has closed construction loans of \$485 million, \$632 million and \$100 million (Exhibit Pet. 6, pp.3:21 to 4:2), and typically those construction loans have been or are in the process of converting to term loans, a process that Mr. Sundstrom agreed was a tested and appropriate mechanism for accomplishing the financing. *Tr. Day V*, p.157:7-19. As Mr. Lowe testified in response to cross-examination on the last day of hearings, NEP has won Renewables Deal of the

Year or Environmental Deal of the Year awards³ for some of their project financings. *Tr. Day VIII*, p.148:9-18. The financing strategy to be used here is not significantly different than what Noble has accomplished in the past, despite market changes. *Tr. Day V*, p.101:10-24. As Mr. Lowe further clarified at the hearing, by the time construction financing is in place they will also have commitments for term financing. *Id.*, p.113:15-21. Although the proposal is for a limited recourse project financing, rather than to fund this Project on the balance sheet of the parent company, project financings, as Mr. Sundstrom testified, are generally done in this way. *Id.*, p.196:2-8. Witnesses Lowe and Wood testified that GRP plans to secure a purchase power agreement (“PPA”) for this Project, because in this market more lenders will likely be comfortable with a PPA with a credit-worthy utility purchaser and allow GRP to raise a sufficient level of debt to support project financing (approximately \$175 million). *Id.*, p. 102:24 to 103:6. The fallback strategy will be to enter into an energy price hedge agreement with a credit-worthy counterparty to stabilize the price of power experienced by the Project. *Id.* This was a strategy that Mr. Sundstrom supported and agreed was a responsible approach, *Id.*, 166:20 to 167:16. Toward the end of his testimony, Mr. Sundstrom said:

I think that, given market conditions as they are currently, the plans that they have submitted, in my opinion, are the correct approaches to take to the marketplace at this time, and present the Project in the best possible case to potential lenders and investors.

Id., p.195:18-23.

As Mr. Sundstrom also testified, NEP is no longer a “development stage” company as it has transitioned wind parks in New York to the operating phase generating significant revenue. *Tr. Day V*, p.138:19-23. As he further testified, there are

³ These awards are: Euromoney/Project Finance Magazine – 2007 and 2008 North American Renewables Deal of the Year; Project Finance International – 2007 and 2008 Americas Environmental Deal of the Year.

participants in the market who are very committed to alternative energy, *Id.*, p.143:8-15, a fact that increases the likelihood of obtaining financing for this Project. Mr. Sundstrom admitted that as he obtained more information about the Project, he became more comfortable with it and with NEP's financing than he was when he submitted his prefiled testimony. *Id.*, p.155:5-10. Near the end of his testimony he concluded "this looks like a very good project in this new world." *Id.*, p.185:6-7.

Mr. Sundstrom testified about the three different scenarios that one of his associates prepared to analyze the impact on the Project in the event there were a reduced number of turbines or the installed capacity was reduced. Exhibit PC 7; *Tr. Day V*, pp.149:9-12. As Mr. Sundstrom testified, they used pro rata project capital cost reductions as a "simplifying assumption". *Tr. Day V*, pp.150:24 to 151:3. This is a flawed approach because they failed to consider that certain costs will remain fixed even with a fewer number of turbines. In other words, reducing the project expenses by a pro rata amount for each scenario, is an invalid assumption given that there are costs associated with connecting this Project to the transmission grid and facility operating costs that are fixed and will not change even if the number of turbines were to be reduced. As Mr. Sundstrom conceded, his approach was a "quick and dirty analysis [which] would have to be fine-tuned for any kind of scale influences that would occur when you scale down the project". *Id.*, p.151:13-16. The analysis also used a simplified capital structure. *Id.*, p.151:16-18. Mr. Sundstrom agreed that the results of this analysis could vary significantly if they took into account the project-specific assumptions with regard to fixed costs. *Id.*, p. 178:1-13.

Because there is no other testimony in the record to support reducing the Project to a 60MW, or 75 MW project and, given the above-described flaws in Mr. Sundstrom's analysis, his numbers are purely arbitrary and therefore unreliable. Moreover, both the 60MW and the 75 MW scenario would meet the material change scenario outlined by Mr. Lowe and would thus have a negative effect on the financial viability of the Project. Either of these scenarios could also cause further delays because such a change may be considered a material modification for purposes of the ISO system impact analysis. *Id.*, pp.106:4 to 108:23. Mr. Sundstrom agreed that this "was a good point for not scaling the project back". *Id.*, p.178:14-23.

Mr. Lowe testified that between NEP and its owners, and GRP's minority equity partner, funds would likely be available for the equity portion of the financing, and additionally, the Project would be able to attract equity capital independently if it were well structured. *Tr. Day V*, pp.48:10 to 49:13, p.50:1-12. Mr. Wood also said that NEP's net equity position in this Project will probably be less than it has been with other projects that were grouped together, though from a pro rata perspective the equity will be comparable. *Id.*, p.103:7-21.

Although it is clear that the financial markets are difficult today, the stimulus package, also known as the American Recovery and Reinvestment Act of 2009 ("ARRA"), is likely to stimulate investment and provide substantial financial support for the proposed Project. ARRA allows entities that are eligible for the federal investment tax credit to instead receive an equivalent financial grant, which will cover approximately 30% of the cost basis of qualified renewable energy projects. However, this incentive is available only if the Project is placed into service in 2009 or 2010, or if construction is

commenced during 2009 or 2010 and the Project is placed into service prior to 2013 (for wind projects). *See* The American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5 § 1603. NEP's witnesses Lowe and Wood testified to the benefits of the ARRA, as did Mr. Sundstrom. *Tr. Day V*, pp.34:8 to 35:10, pp.44:22 to 45:23, pp.143:15-22. Mr. Sundstrom further said that the "timing is good" for this Project given the ARRA and said that this is "a critical factor." *Id.*, 155:19-23. In fact, this Project is in a unique position to take advantage of some of the benefits of the ARRA that have specific time limits. *Id.*, p.36:5-12, pp.181:17 to 182:2. No other projects in New Hampshire are as far along as this Project. Encouraging investment in this Project is also consistent with the explicit goal stated in NH's RPS law, RSA 362-F:1 ("It is therefore in the public interest to stimulate investment in low emission renewable energy generation technologies in New England and, in particular, New Hampshire, whether at new or existing facilities.")

While the difficulties in the financial markets have created problems for developers like NEP, there is a special financial opportunity for this Project. The fact that NEP has not yet signed a turbine supply contract is likely to be of financial benefit to the Applicant *Tr. Day I*, pp.216:19 to 217:15; *Tr. Day V*, p.30:1-22, pp.32:18 to 33:7. NEP has also taken a prudent approach to the markets by cutting back on certain parts of its business, including development functions, while at the same time increasing its operations staff. Exhibit Pet.6., pp.10:20 to 11:4; Exhibit Pet.8, p.3:3-6. In addition, as Mr. Lowe testified, as much as it has been a rough six months from a financing perspective, they see banks becoming comfortable with entering into a dialogue with NEP and other developers, thus engendering confidence that they are going to be able to attract capital to the Project. *Tr. Day V*, pp.123:23 to 124:8, pp.129:24 to 130:20,

pp.131:14 to 133:1. Sundstrom also said that the “return profile today looks good” for this Project. *Tr. Day V*, p.156:3.

GRP has met the burden of showing by a preponderance of the evidence that its majority member has adequate financial capability to own and operate this project, a capability that it has shown by its ability to own, construct and operate 726 MW of wind power projects in New York and Texas. The test is not whether there is financing in place now; it has never been the SEC’s practice to require such a showing and the statute does not require that. The test is whether there is adequate financial capability to assure construction and operation, and the record evidence establishes that Noble clearly has such capability. As the SEC has recognized, “the financing of electric power generation facilities can be complex and difficult. Large electric generation projects are expensive and implicate numerous permitting, regulatory and safety concerns... .” Docket No. 2004-01, *Decision and Order* dated October 27, 2004 regarding the *Joint Application of AES Londonderry, L.L.C. and ABN AMRO Bank, N.V., as Agent, for Approval to Transfer Equity Interests in AES Londonderry, L.L.C. Under RSA 162-H*, at page 8. The SEC has accepted as evidence of financial capability the “willingness” of lenders to extend additional funds toward the completion, maintenance and operation of the facility, even though the operating funds were not guaranteed. *Id.* See also SEC Docket 98-01, *Decision* regarding Newington Energy, L.L.C., (May 25, 1999)(the Committee recognized, at page 11, that the Applicant “seeks to finance \$185 million of the proposed project and estimates that an additional \$120 million will be necessary to complete construction” and further noted that the Applicant “has made a considerable investment in the Project to date and based upon its representations appears to be ready to continue to

make substantial contributions to and investments in the Applicant and its proposed facility.”) Thus, the Committee has accepted proof of financial capability in other proceedings that is far different than what Public Counsel has suggested should be required here. Moreover, limited recourse financing, as noted above, is typical for the financing of projects like this.

As Mr. Wood testified, and Mr. Sundstrom concurred, investors prefer diversity in investment portfolios and for that reason a project in New Hampshire with good wind resources, *Tr. Day V*, p.162:11-20, that will use a wind turbine that has been installed and used around the world and is designed to make the best use of these resources, *Tr. Day V*, pp.76:5 to 77:11, and that is positioned to take advantage of stimulus package benefits as noted above, and may very well have a purchase power agreement in place, is likely to be attractive to investors. *See, e.g., Tr. Day V*, pp.120:22 to 121:9. In his report on the economic impact of the Project in Coös County, Professor Gittell noted that “New England has not been attracting wind power investment in proportion to its potential”, which he notes is unexpected given areas with significant resources and the passage of RPS laws. Exhibit Pet. 2.2, Appendix 56, p.3. This is further evidence of the likely attractiveness of this particular Project to investors. *See also* discussion at *Tr. Day V*, pp. 120:22 to 121:23.

NEP has suggested that the Subcommittee include a condition that no construction on the Project begin until construction financing is in place to allay concerns that the Project may be commenced, but not completed. Exhibit, Pet. 6, p. 8; *Tr. Day V*, pp.113:8 to 114:4. Public Counsel’s financial witness even suggested that this condition should be relaxed to allow GRP to proceed with improvements to the property so long as

any potential site restoration or other environmental compliance costs were bonded, to help ensure that the Project could be built to take advantage of the timing of the stimulus package benefits. *Id.*, pp.181:11 to 182:17, p.187:3-13. What Mr. Lowe also pointed out, however, is that any condition that required a line-by-line analysis of financing terms would be counterproductive to financing. *Id.*, p.115:6-18.

By conditioning the commencement of construction on obtaining financing, the Subcommittee's concern for successful project completion will be addressed by the additional protections that lenders impose, such as the review by the lender's independent engineer of the site suitability analysis done by the manufacturer, and the final wind report on the wind resources prepared by an independent analyst acting for the lenders, both of which are typically done around the time of construction financing. *Tr. Day V*, p.110:5 to 112:9. As Mr. Sundstrom testified, this Project will not be financed without good wind data. *Id.*, p.160:3-5. As Mr. Lowe said, lenders and capital providers are going to want to see that they can get payback in a worst case scenario. *Id.*, pp. 127:21 to 128:5. In addition, the manufacturer would not approve the sale of turbines for a site it is not comfortable with. *Id.*, p.112:1-10. Lenders will also need to get comfortable with the overall engineering review and the revenue stream. These are all additional protections that should give the Subcommittee comfort.

Also, the Applicant's proposed agreement with Coös County officials incorporated into the proposed conditions that are included as Attachment A addresses decommissioning and insurance and provides additional assurance to protect against various (and for the most part unlikely) scenarios that some fear could lead to the abandonment of the Project.

Although Public Counsel and a few other intervenors expressed concerns about mechanic's liens that have been filed in New York, as the Subcommittee heard on the final afternoon of hearings held to specifically address this issue, mechanic's liens are fairly common for projects of this size. Mr. Lowe testified that he has seen such liens in the project finance world for many years, and that they are a tool used by contractors to preserve their rights or as a negotiation strategy. *Tr. Day VIII*, pp.9:23-10:3. Project finance agreements in fact anticipate this possibility. *Id.*, p.10:8-12. In terms of the number of liens filed in New York, as Mr. Lowe pointed out, because the underlying property of a wind project is by its nature dispersed, with individual turbines often placed on different patches of land, those seeking the liens split their claims up into a number of different liens that are filed on different pieces of property. *Id.*, p.20:10-24. Thus while the number of liens may seem large, the number of actual disputes is likely to be a much smaller number. The total value of the mechanic's liens in New York constitute a very small percentage of the total cost of the project. *Id.*, p.17:2-4. A significant number were caused by a subcontractor going out of business, *Id.*, p.144:22-23, and Noble has taken a number of steps to address the liens, including settling with one of the companies that filed a number of liens, *Id.*, p.38:3; p.39:8-18, and putting up bonds to cover the amount of the liens that remain so that the underlying property owners are not affected. *Id.*, pp.15:5-9; pp.102:9 to 103:13. As Mr. Lowe said, the way in which Noble has handled the liens in New York is likely to help it with future projects. *Id.* Noble has also taken steps to reassure the landowners. *Id.*, pp.146:1 to 147:19; Exhibit Pet.51.

2. Technical And Managerial Capability

a. Technical Capability

Substantial evidence of the Applicant's technical capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of the certificate can be found in the Application (Exhibit Pet.1.1, pp.62-64), the Supplement to the Application (Exhibit Pet.2.1, pp.3-4), in the prefiled testimonies of Daniel Mandli Senior Vice President, Operations, (Exhibits Pet. 7 and 8), and Mr. Mandli's testimony during the hearing. Noble has an operations center in Plattsburgh, New York from which it monitors NEP's 726 MW of wind power, 484 wind turbines in 7 wind parks on a 24/7 basis. Exhibit Pet.8, p.2:9-15. It has increased the size of its staff handling these operations so that it now has an operations team of 60 people. *Id.* p.3; *Tr. Day I*, p.48:17-21.

In terms of knowledge of the Vestas V90 turbines that will be used for this project, Mr. Mandli testified that he had worked for Vestas and the precursor company to Vestas for seven years. *Tr. Day I*, p.67:14-17. These turbines are being used in many locations in the United States and the world and were chosen for this Project because they are designed to take advantage of the wind regime found at the Project site. *Tr. Day V*, pp.42:16-21, p.43:3-5, p.77:1-11; Exhibit Pet. 22.1, response to IWAG 1-7. Mr. Mandli testified about the Supervisory Control and Data Acquisition System ("SCADA") connected with the Monitoring Center in Plattsburgh and the fact that turbines are monitored 24 hours a day, which makes it inconceivable that a turbine failure could occur that would go unnoticed. *Tr. Day I*, pp. 78:17 to 79:7.

While a turbine at one of NEP's projects in New York collapsed just prior to the start of the hearings, as Mr. Mandli testified, it was a GE turbine, not a V90 Vestas turbine, the type to be used for this Project. *Tr. Day I*, p.70:15-20. The investigation of the causes of the problem is likely to take some time to complete. While the turbines were initially turned off for safety reasons, NEP and GE did a thorough analysis and were comfortable that it was an issue with just two turbines. *Tr. Day V*, p.40:10-21.

By virtue of its experience operating wind parks in New York and Texas, its staff and operations center, and the plan for operation of this Project, NEP submits that it has the technical capability to assure the construction and operation of the wind park as required by the statute.

b. Managerial Capability

The support for Noble having adequate managerial capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of the certificate is in the Application, Exhibit Pet.1.1, pp.62-64, and Exhibit Pet.2.1, pp.3-4, as well as in the prefiled and hearing testimony of Messrs. Low, Wood, and Mandli, Exhibits Pet.5-8.

Although changes in the financial markets and the economy have led to some reductions in Noble's staff, particularly in development functions, as well as suspension of some development projects, this approach has been responsible and prudent from a financial and managerial perspective. *Tr. Day V*, pp.179:22 to 180:3. Despite this, Noble has maintained a managerial team that is leaner, and fully capable of managing this Project and its other projects. Exhibit Pet.6, pp.10:20 to 11:6. The Subcommittee heard from three members of the management team: Messrs. Lowe, Wood and Daniel Mandli,

all of whom have significant expertise in the development, financing and operation of wind power projects. As Mr. Lowe testified, he has over 20 years experience in banking *Tr. Day V*, p.37:4-5. Mr. Wood has a similar level of experience in the project finance and power generation sectors. Exhibit Pet. 6, p.1:31-34. Mr. Mandli has many years of experience with wind plant operations and the manufacturing of wind turbines. Exhibit Pet.7, pp.1:32 to 2:7.

Although NEP has not constructed a ridgeline facility before, it intends to hire a construction company with appropriate relevant experience and to hire an independent engineer to oversee the construction. *Tr. Day V*, p.79:9-13. NEP will also obtain a site suitability analysis from the turbine supplier indicating that the supplier is comfortable with the turbine operating in the environment. As previously noted, the lenders require this. *Tr. Day V*, p.83:3-9. There will be further construction and operations feasibility analysis before GRP finances the Project. *Tr. Day V*, p.84:16-18.

NEP has demonstrated its requisite managerial capability as well through its management of its facilities in New York and Texas.

B. The Site and Facility Will Not Unduly Interfere With the Orderly Development of the Region

This site and facility will not unduly interfere with the orderly development of the region with due consideration having been given to the views of municipal and regional planning commissions and municipal governing bodies. The support for the Project meeting this standard is found in the Application and Supplement to the Application, Exhibit Pet..1, pp.91-100 and Exhibit Pet.2.1, p.5:7-16, and in the testimony of Jean Vissering, Exhibit Pet.15, p.8:4-12, and Exhibit Pet.16, p.5:7-16, and Pip Decker and Mark Lyons, Exhibit Pet.3, pp.8:25 to 9:18 and Exhibit Pet.4, pp.4:1 to 5:6..

This Project is to be built primarily in unincorporated areas in Coös County where the County is responsible for overseeing and approving development. Some of the interconnection lines and the substation and maintenance building will be located in the Town of Dummer, which has limited zoning regulations. The Project is consistent with the 2006 Master Plan for Unincorporated Places in Coös County, Exhibit Pet.2.2, Appendix 52, p.25, which “encourage[s] the development of wind power projects and other alternative energy resources where these can be undertaken in an environmentally sound manner.” County officials support this Project. Letters in the record indicate support from the County Planning Board, Exhibit Pet.2.2, Appendix 49, the County Commissioners, Exhibit Pet.2.2, Appendix 50, and the County Delegation, Exhibit Pet.3, p.16:4-8. The Town of Dummer supports the Project as evidenced by the letter in the record and proposed conditions. Exhibit Pet.2.2, Appendices 47 and 48.

The Project will bring significant economic benefits to the region. The Applicant has entered into a payment in lieu of tax agreement, Exhibit Pet.2.2, Appendix 51, that will bring consistent revenues to the County and the unincorporated areas. Tax revenues will also flow to the Town of Dummer. As the study by Professor Ross Gittell indicates, over \$122 million in direct, indirect and induced benefits will be provided to the local economy over a 20 year period and this Project will represent an economic bright spot in an area of NH that has been struggling. Exhibit Pet.2.2, Appendix 56, p.3. The Project has in fact already begun to bring dollars into the local economy. While the greatest economic activity and benefits for the County and surrounding area will be during the construction phase, when 550 jobs are expected to be created, including employment directly from the Project and indirect and induced

employment, impacts after construction will also be significant. In Professor Gittell's opinion, the immediate and positive economic impacts from this Project can be particularly valuable to the local economy. *Id.*, p.14.

As the SEC noted in the *Lempster* Order, at p. 25, the analysis of visual impacts is part of the analysis of whether a project will unduly interfere with the development of the region. As described in more detail in Section IV.C below, the visual analysis conducted by Ms. Vissering, substantially uncontested during the hearing, shows that the Project will be visible only from limited locations in the region and will not have an unreasonable adverse effect on aesthetics. Exhibit Pet.1.1, pp. 65-69; Exhibit Pet.15, pp.5:7 to 8:2; Exhibit Pet.16, pp.2:1 to 5:6; *Tr. Day II*, pp.146:3 to 152:22. Related to visual impacts is the impact on tourism. Ms. Vissering's testimony revealed that she has reviewed available data and is not aware of any evidence or published studies of a wind park having a negative impact on tourism, and in fact, she has personally experienced positive tourism impacts from wind parks. *Tr. Day II*, pp.182:12 to 183:21, pp.184:19 to 186:5. Professor Gittell's report noted the possibility of a similar positive impact from "green tourism." Exhibit 2.2, Appendix 56, pp.17-18. In addition, Mr. Lyons testified that GRP is not aware of any studies that indicate the installation of a wind park would have a negative effect on property values. *Tr. Day I*, p.112:3-16. The Application also referenced studies that show wind parks have no adverse effect on property values and copies of two such studies were included as appendices. Exhibit Pet. 1.1, p.98; Exhibit Pet. 1.3, Appendices 30a and 30b. Professor Gittell's report also referenced a study showing no support for the claim that wind turbines negatively impact property values. Exhibit Pet. 2.2, Appendix 56, p.17.

As GRP noted in the Application, the impact of this Project on recreation is likely to be minimal. The Project is to be located on private land where the landowners currently accommodate some public recreational uses of their land in accordance with policies designed to permit public access to the land for certain recreational purposes, while encouraging public safety and protecting the owners' ability to continue commercial timber activities safely and efficiently. This type of access is compatible with the access typically allowed for a wind park. Signage is maintained by the owners to direct these activities, and gates or similar impediments are used to control motorized access to remote parts of the property. Moreover, in a letter sent to Chairman Burack dated September 8, 2008, GMO Renewable Resources, one of the landowners, indicated that the wind park would not impact the level of current activity on the land and said it had no intention of limiting future recreational activities. While local snowmobile clubs maintain and utilize trail systems in the vicinity, the Project will only have a limited impact on snowmobiling and ATV riding. The impact on hiking, cross-country skiing and mountain biking trails will be similarly limited. The Cohos trail for hikers has been recently developed and is still evolving in places. Exhibit Pet. 1.1, pp. 92-96. Mr. Decker also testified that he had received an email from the Cohos trekkers to the effect that the wind park was largely compatible with the Cohos trail. *Tr. Day II*, p.119:1-3. There will be little or no impact on canoeing, kayaking, boating, camping, hunting and fishing. Members of the Millsfield ATV Club provided statements of position on the Project from its members at the March 23 public hearing. *Tr. Pub. St. Hring.*, p.45:6-10. The majority of these statements supported the Project, particularly if it would not impact on their trail system, which it will not. Mr. Decker testified that

GRP is working with the local hikers and snowmobilers. *Tr. Day II*, p.114:8-15.

Members of the public testified at the public hearing that the Project would not interfere with recreational uses of the Project area. *See, e.g., Tr. Pub. St. Hring.*, p.32:1-4, p.61:16-24.

Finally, because the Project area has been used for commercial logging purposes for 100 years, the development of a wind park should not interfere with the character of the area and thus the orderly development of the region. Exhibit Pet.1.1, pp. 91-92. In fact lease revenues from this Project will provide a benefit to landowners and therefore are likely to assist in keeping this land available for similar purposes for some time.

C. The Site and Facility Will Not Have an Unreasonable Adverse Effect on Aesthetics

The Applicant has provided the Subcommittee with sufficient record evidence to support a conclusion that the Project will not have an unreasonable adverse effect on aesthetics. *See RSA 162-H:16, IV. (c)*. The only witness with expert qualifications who testified on this issue was Ms. Jean Vissering. Since 2002, Ms. Vissering has worked extensively on the issue of the visual impacts of wind energy projects. Exhibit Pet.15, pp.2:2-3. She prepared a Visual Assessment Report which was submitted with the Application. *See Exhibit Pet.1.2, Appendix 11*. The Report provides an analysis of the Project's aesthetic impacts using a methodology outlined in a report of the National Academy of Science co-authored by Ms. Vissering and other members of a committee appointed by the Academy's National Research Council. *See Exhibit Pet.15, p.2:8-10, p.4:19-20*. The Report contains several photographs taken at viewpoints from which the Project would be visible. Exhibit Pet.1.2, Appendix 11. The Report also contains photo

simulations⁴ which depict the Project's turbines at various locations. *Id.* The report concludes, *inter alia*, that the Project would not result in unreasonably adverse visual impacts and would not interrupt or detract from existing scenic resources within the area. *Id.* at p.48.

Both Ms. Vissering's prefiled and supplemental testimonies conclude, based upon the information in her studies, that the Project would not have an unreasonable adverse effect on aesthetics. Exhibit Pet.15, p.8:1-2 and Pet. Exhibit 16, p.5:4-6. Ms. Vissering's prefiled testimony states that she has visited many existing and potential sites for wind energy facilities and that based upon her professional training and experience in evaluating sites for proposed wind energy facilities, this particular site is an excellent one and the overall scale of the Project is well suited for its setting. Exhibit Pet.15, pp.5:6 to 7:21.

Ms. Vissering's oral testimony at the adjudicative hearings provided additional support for the conclusions in her prefiled and supplemental testimonies. She indicated on cross-examination by Public Counsel that there are some very sound methodologies and systematic approaches for evaluating landscapes and that she has spent much of her professional life addressing that issue. *Tr. Day II*, pp.165:16 to 166:1. She also indicated that there have been cases with which she has been involved where she has found a proposed wind energy project to be inappropriate. *Tr. Day II*, p.155:11-13. Thus, Ms. Vissering has provided balanced, credible expert testimony that the Project will not have an unreasonable adverse impact on aesthetics.

⁴ In response to a data request from Public Counsel during the discovery phase of the proceedings, Ms. Vissering prepared a comparative visual assessment and additional photo simulations from Lake Umbagog, see Exhibit Pet.2.1, Appendix 55d, pp.3-4, and from the Panorama Golf Course. See Exhibit Pet.21.2, PC 2-44, Attachment 1.

To the extent that “shadow flicker” may be considered an aesthetic issue, Matthew Borkowski’s prefiled testimony supports a finding that the Project’s shadow flicker will not have an unreasonable adverse effect on aesthetics because any potential shadows would occur “well away from any local residence or business.” Exhibit Pet.20, p.4:3-11.

Based on the foregoing, the Subcommittee can find that the Project will not have an unreasonable adverse effect on aesthetics.

D. The Site and Facility Will Not Have An Unreasonable Adverse Effect on Historic Sites

Ms. Hope Luhman, Ph.D., an anthropologist with over 20 years of experience in historic preservation and cultural resource management, presented uncontroverted expert testimony that the Project will have no unreasonable adverse effect on historic sites. In addition to her prefiled and supplemental testimonies on that issue, Ms. Luhman provided oral testimony at the adjudicative hearings updating her supplemental testimony by indicating that the New Hampshire Division of Historic Resources had concurred with her determination that no further archeological work on the Project was warranted. *Tr. Day II*, p.196:2-8. She also testified that the Division of Historic Resources had recently made “final effect” determinations for all eight (8) of the properties within the area of potential effects (“APE”) that had been determined eligible for listing on the Natural Register. *See Tr. Day II*, pp.197:21 to 198:4, p.199:12-23. Exhibit Pet.36 indicates that the final determinations for those properties were that they either had no effect or no adverse effect. In response to cross-examination questions from Public Counsel, Ms. Luhman testified that the Division of Historic Resources has not requested and would not be requesting any mitigation for the Project’s impacts on historic resources because it has

determined that that the Project creates no adverse effect on historic resources. *See Tr. Day II*, pp.199:24 to 200:3. Accordingly, based on Ms. Luhman's testimony and the determinations made by the Division of Historic Resources, the Subcommittee can determine that the Project will have no unreasonable adverse effect on historic sites.

E. The Site and Facility Will Not Have an Unreasonable Adverse Effect on Air Quality

Because the Project will use the wind to generate electricity, it will have no air emissions and therefore will not adversely affect air quality. The environmental benefits of this Project (from an air resources and climate change perspective) are explained in the Application, Pet. Exhibit 1.1, pp.73-74. As explained in Table D of the Application, the Project can contribute positively to regional air quality by offsetting hundreds of thousands of pounds of per year of carbon dioxide, sulfur dioxide and nitrogen oxides. That the Project will add a new power source without creating any air pollutants or greenhouse gases is a major benefit that should not be understated or taken for granted. No party has challenged, or is able to refute, the fact that the Project will have no adverse impacts on air quality. Thus, the Applicant meets the air quality criterion in RSA 162-H: 16, IV(c).

F. The Site and Facility Will Not Have an Unreasonable Adverse Effect on Water Quality

The Application, at pages 75 through 78, summarizes the Project's impacts on water quality. Exhibit Pet. 1.1, pp.75-78. More detailed information about the Project's impacts on water quality is contained in the Application Appendices that contain the Project's Standard Dredge and Fill Application, Alteration of Terrain Applicant and

Request for Section 401 Water Quality Certification. *See* Exhibits Pet. 1.4, 1.5 and 1.2 (Appendix 4), respectively.

Wetlands Impacts and Mitigation

The Applicant provided evidence of the Project's impacts on wetlands in the form of prefiled and live testimony of its wetlands consultant, Raymond Lobdell, a New Hampshire certified wetlands and soil scientist having more than 30 years of experience in those fields. *See* Exhibit Pet.11, pp.1:29 to 2:5 and Exhibit Pet.12. Mr. Lobdell's testimony establishes that the Project has taken appropriate steps to avoid, minimize and mitigate wetlands impacts. *See* Exhibit Pet.11, pp.5:12 to 7:18. In addition, Mr. Lobdell's testimony supports a finding that the Project will not have an unreasonable adverse effect on wetlands. As he notes: "[w]etlands impacts will be minimized by siting turbines and infrastructures out of wetlands whenever possible, utilizing existing logging roads for access during construction and operation of turbines whenever possible, constructing any new access roads to avoid wetland impacts, and mitigating unavoidable wetland impacts in a manner that meets or exceeds all state or federal minimum standards." *Id.*, p.7:14-18.

To mitigate the Project's unavoidable impacts on approximately 13.5 acres⁵ of wetlands, the Project has developed a compensatory mitigation plan, *see* Exhibit Pet.2.2, Appendix 45, which involves, among other things, upland buffer protection by permanently conserving approximately 620 acres of land on the Phillips Brook Tract. *See* Exhibit Pet.11, pp.6:18 to 7:6 and Exhibit Pet.12, pp.2:16 to 4:19. The mitigation

⁵ The Applicant counted wet ditches that currently exist alongside existing logging roads in the total calculation of wetlands impacted by the Project. However, the Applicant did not take credit for or count as mitigation, the new replacement wet ditches that will be created as the result of upgrading the existing logging roads. Thus, the total acreage of unrestored wetlands will actually be less than 13.5 acres. *See* Exhibit Pet.12, p.4:16-19.

area which was selected in consultation with DES contains over 100 acres of wetlands, *Tr. Day VI*, p.120:17-18, is located in the headwaters of the Phillips Brook watershed and has been identified as an important subwatershed area of the Upper Ammonoosuc River in the N.H. Fish and Game Wildlife Action Plan. *See Exhibit Pet.11*, pp.6:19 to 7:5. The mitigation plan also includes the creation of vernal pools and the restoration of several perennial and seasonal stream crossings. *Exhibits Pet.12*, p.4:3-15 and *Pet.2.2*, Appendix 45, pp.16-17.

By letter dated February 10, 2009, the Water Division of the New Hampshire Department of Environmental Services ("NH DES") presented its recommended findings and conditions with respect to the Project's Wetlands Permit. *See Exhibit Pet.40*. NH DES has determined that the wetlands mitigation proposal (which did not take into account even more favorable mitigation measures adopted later in the process) meets the ratios outlined in DES's mitigation rules (Chapter 800) and that the Applicant has demonstrated by plan and example that each factor listed in Env-Wt 302.04(a), Requirements for Application Evaluation, has been considered in the design of the Project. *Exhibit Pet.40*, Findings 10 and 11. Accordingly, in addition to the record evidence offered by the Applicant, the detailed findings and recommended permit conditions issued by DES will assure that the Project has no unreasonable adverse effect on water quality insofar as wetlands are concerned.

Although Public Counsel's witnesses, Drs. Sanford and Mariani, offered proposed wetlands permit conditions in addition to those recommended by DES, they conceded that they did not consider New Hampshire DES standards in making their recommendations in this case. *Tr. Day VI*, p.129:2-6. One of those recommendations is

that the Applicant create and/or restore 13.5 acres of wetlands to offset the wetlands that would be lost as the result of the Project. *See* Exhibit PC 1, p.11:17-21. However, at the hearing, Dr. Mariani admitted that there is no requirement in the State of New Hampshire that the Applicant create 13.5 acres of new wetlands as mitigation for the 13.5 acres of wetlands that the Project will be impacting. *Tr. Day VI*, p.140:2-10. The record also reveals that Sanford Environmental, the company where Dr. Sanford had been employed as President and where Dr. Mariani currently serves as President, does not consistently prescribe restoration and creation as the only acceptable wetland mitigation strategies. *Tr. Day VI*, p.161:5-8. Thus, while Drs. Sanford and Mariani may prefer that the Applicant in this case create and/or restore 13.5 acres of wetlands to compensate for the Project's wetlands impacts, they do not always adhere to that standard themselves, and they concede that such action is not required given that the Applicant has presented a mitigation plan that contains upland buffer compensation. *Tr. Day VI*, p.140:18-23. Notably, while Dr. Sanford and Dr. Mariani recommended several wetlands permit conditions in addition to those recommended by NH DES, neither of them testified that the Project will create unreasonable adverse impacts on water quality.

Other Water Quality Impacts

In addition to the detailed information on the Project's anticipated impacts on water quality provided in the Request for Section 410 Water Quality Certificate and Alteration of Terrain Permit Application, GRP submitted the prefiled testimony of Philip Beaulieu, a licensed professional engineer employed by Horizons Engineering, LLC ("Horizons"). *See* Exhibit Pet. 9. GRP also submitted the supplemental testimony of Horizons' President, Stephen LaFrance, a professional engineer licensed in New

Hampshire, Vermont and Maine, who adopted Mr. Beaulieu's prefiled testimony. *See* Exhibit Pet.10. In addition to addressing the Project's impacts on water quality, Mr. LaFrance's testimony discussed proposed mitigation of those impacts and responded to prefiled testimony of Public Counsel's witnesses and the Intervenors on this issue. In addition, Mr. LaFrance's supplemental testimony described revisions to the original Project design that were made in response to comments from NH DES and the other parties. *See* Exhibit Pet.10, pp.2:13 to 4:2. Mr. LaFrance testified at the hearing that 143 sheets comprise the Project design plans and that nearly all of them had been changed or modified as a result of his consultations with NH DES. *Tr. Day III*, pp.287:4 to 288:18. He also testified that the revised plans included for certain areas the "rock sandwich" road construction technique that had been recommended by Dr. Sanford and Dr. Publicover (on behalf of AMC). *Tr. Day III*, pp.183:19 to 184:21. Further, in response to concerns raised by Drs. Sanford and Mariani regarding minimization of high elevation wetland impacts, Mr. LaFrance indicated that during construction, the Project will review available site specific geotechnical analyses and amend the construction plans to use stone retaining walls and ledge cut faces where the Project engineer determines that conditions are suitable and no hazard to health and safety exists. Exhibit Pet.10, p.8:1-6.

As Mr. LaFrance's supplemental testimony indicates, the Project recognized early on in the design process that water quality concerns would be important and therefore planned measures to protect water quality both during and post construction. Exhibit Pet. 10, pp.6:22 to 7:10. The record shows that GRP has acted responsibly to modify its plans in consultation with NH DES and to incorporate some of the suggestions related to water quality protection made by Public Counsel's witnesses and AMC. On February 10, 2009,

NH DES issued findings and conditions for the Section 401 Water Quality Certificate and project specific conditions for the Alteration of Terrain Permit. *See* Exhibits Pet.39 and 41. As Mr. LaFrance's supplemental testimony indicates, he has reviewed the proposed findings and conditions for those permits and the wetlands permit, and finds them reasonable and acceptable. Exhibit Pet.10, p.6:8-15. He and GRP intend to accept and follow them through construction. *Id.* In these circumstances, the Subcommittee may conclude that the Project will have no unreasonable adverse effect on water quality.

G. The Site and Facility Will Not Have an Unreasonable Adverse Effect on The Natural Environment

Natural Environment

The Application at pages 78 through 87 describes the steps the Applicant has taken to evaluate the Project's anticipated impacts on the natural environment as it relates to birds, bats, wildlife, and plants/natural communities. In addition, on these subjects the Applicant presented the expert testimony (prefiled, supplemental, revised supplemental and oral) of Project Manager/Wildlife Biologist Adam Gravel and Steven Pelletier, a certified wildlife biologist, professional wetland scientist and licensed/certified forester with over 25 years of professional experience. *See* Exhibit Pet.13, pp.1:29 to 2:13. Both Mr. Gravel and Mr. Pelletier are employed by Stantec Consulting (formerly known as Woodlot Alternatives), an environmental consulting firm with significant experience⁶ in conducting wildlife studies at proposed wind energy projects.

⁶ Messrs. Gravel and Pelletier estimate that Stantec has conducted over 120 seasons of wildlife surveys involving over 60 proposed wind projects throughout the northeast and mid-Atlantic coastal states. Exhibit Pet.13, p.3. They estimate that Stantec has conducted pre-construction surveys at over 100 proposed and operational (combined) wind projects. Exhibit Pet.14, p.29:9-10. The SEC has characterized Stantec's/Woodlot's survey experience as "considerable". *Application of Lempster Wind, LLC*, Docket No. 2006-01, Decision (June 28, 2007), p. 35.

Stantec conducted several studies at the Project site and prepared reports of those studies which were submitted with the Application. *See* Exhibits Pet.1.2, Appendices 19-20, and Pet.1.3, Appendices 21, 24 and 25. In addition, the New Hampshire Audubon Society conducted a breeding bird survey in the Project area in the spring of 2007. *See* Exhibit Pet.1.3, Appendix 23. Messrs. Pelletier and Gravel were cross-examined extensively and answered several questions from Subcommittee members. Based on the record evidence, a summary of which appears below, the Subcommittee may determine that the Project will not create an unreasonable adverse effect upon the natural environment as it relates to birds, bats, wildlife, wildlife habitat and plants/natural communities.

Avian and Bat Impact
Migrants

Stantec conducted three seasons of nocturnal avian migration radar surveys within the Project area within a year and a half. Exhibit Pet.13, p.5:2-3. Stantec complemented data from its fall 2006 and spring 2007 nighttime radar bird migration surveys and bat detector surveys with data from another site approximately 4 miles away at which Stantec was performing the same studies during the same time periods. *See* Exhibits Pet.13, p.5:9-16 and Pet.1.3, Appendix 22. This allowed a unique opportunity for comparisons of migration activity between sites in close proximity and with similar elevation and habitat. *Id.*

From Ms. Linowes' prefiled testimony and cross-examination questions, it is apparent that she believes that the Applicant should have conducted more studies and in support of her position, she points to Interim Guidelines issued in 2003 by the United State Fish and Wildlife Services ("USFWS"). However, her argument is undermined by

the guidelines themselves, which clearly indicate that they are “voluntary and interim in nature.” Exhibit IWA 21. Moreover, the SEC has recognized that the USFWS guidelines regarding the duration of pre-construction avian studies are recommendations, not requirements. *See Application of Lempster Wind, LLC, SEC Docket No. 2006-01, Decision Issuing Certificate of Site and Facility With Conditions (June 28, 2007), p.34.*

Stantec’s professional experience at over 100 proposed and operational wind projects as well as the methods and results of its studies for the GRP Project, have led Messrs. Gravel and Pelletier to conclude that the data collected for the Project are appropriate and sufficient to properly evaluate the Project’s risks to migratory birds. Exhibit Pet.14, p.29:5-13. Moreover, as Messrs. Pelletier and Gravel point out, Ms. Linowes’ conclusions about the Project’s potential risks to nocturnal migrants ignores half the data compiled by Stantec. Exhibit Pet.14, p.36:11-12. They also point out that the number of seasons of survey alone is more than most other pre-construction radar surveys conducted in the northeast. Exhibit Pet.14, p.37:8-9. Furthermore, based on their re-analysis of several surveys conducted by Stantec in New York, there was no statistical difference observed between radar survey results from 20 nights of survey and 60 nights of survey. Exhibit Pet.14, p.37:11-13. Accordingly, Ms. Linowes’ insistence upon additional preconstruction avian studies is inappropriate.

Messrs. Pelletier and Gravel’s professional opinions that the Project will not create an unreasonable adverse impact upon avian species is based upon the data collected at the Project site and the other site in close proximity and, based upon their extensive experience in collecting and analyzing both pre- and post-construction data gathered from other wind projects. They specifically note pre- and post-construction

data from the Mars Hill, Maine project which indicate that the Mars Hill site passage rates were higher than those at the GRP site, and that the post-construction mortality rates at Mars Hill for both birds and bats were very low. Exhibit Pet.14, pp.39-40. They therefore reasonably concluded that it is fair to expect that bird and bat mortality will be similar to the Mars Hills project. Exhibit Pet.14, p.40:2-7.

Mr. Pelletier testified at the hearing that rather than focusing on pre-construction studies as indicators of risk to avian species, it is more appropriate that their data be examined to see if there are any red flags that warrant further studies or particular permit conditions to address specific species concerns. *Tr. Day III*, pp.38-39. He further testified that it is the post-construction work that really focuses on identifying risks and that there is much to be learned from them. *Id.*

The Stantec consultants note that, overall, avian mortality at wind farms in the United States is relatively low when considering that hundreds of millions of birds die as a result of collisions with building and windows, predation by house cats, collisions with communications towers, and other sources of human-induced mortality each year. Exhibit Pet.14, p.44:20- p.45:1-2. AMC's witness (Dr. Publicover) testified that he tends to agree with Mr. Pelletier's testimony that wind turbines are going to cause some mortality to migrating birds, and further stated that the more we learn, "the more we realize that those risks are not as severe as we might have originally thought." *Tr. Day IV*, p.256:18-24. This expert testimony provides further support from a third party expert for the Applicant's position that the Project will not have an unreasonable adverse impact to migrating avian species.

The testimony of the Stantec consultants is credible, reliable expert testimony, and the Subcommittee may therefore give it more weight than that offered by others who are not experts. Ms. Linowes' criticisms about the Applicant's studies are outweighed by the above-referenced expert testimony and the record evidence presented by the Applicant. Ms. Linowes does not possess the requisite education, background and experience to be qualified to render an expert opinion on this matter. She admitted during cross-examination that she is not a certified wildlife biologist, has no degree in forestry management or in forestry and wildlife management, and has never conducted an avian radar, raptor or breeding bird survey and has no qualifications to do such surveys. *Tr. Day III*, pp.299:4-5, 299:13-15, and 300:1-11.

Breeding Birds

Mr. Lloyd-Evans conceded that the breeding bird survey was well studied by competent people. *Tr. Day VII*, p.15:23-24. However, he suggests doing more studies to further assess the species that are present. *Tr. Day VII*, p.16:3-6. He essentially argues that the Project needs additional baseline data before construction in order to insure that post-construction data will be more meaningful. *See Tr. Day VII*, p.17:12-13. However, despite Mr. Lloyd-Evans' criticisms of the Project's avian studies, his prefiled testimony indicates that he believes the most significant impact of the Project from the perspective of avian species is not its potential risks to migratory species, but rather, the proposed removal of high elevation spruce-fir habitat used by breeding birds. Exhibit PC 3, p.10:15-16. In response to a data request, Exhibit Pet.33, DR 1-6, Mr. Lloyd-Evans said that if there were some loss of habitat, he would defer to experts like state and federal agencies for mitigation. *Tr. Day VII*, p.22:4-10. As discussed below, one of those state

agencies, the New Hampshire Fish and Game Department, has endorsed a mitigation plan which addresses the concerns expressed by Mr. Lloyd-Evans and others.

Bats

Stantec conducted one full year of bat surveys at the Project site. Exhibit Pet.14, p.49:10-12. Contemporaneously, Stantec performed bat detector surveys at another site 4 miles away. *Id.*, p.49:21-23. Stantec found that, overall, the bat activity levels recorded at both sites were low compared with other studies conducted at proposed wind projects in the northeast. *Id.*, p.50:6-8. Preconstruction data from the Mars Hill project in Maine showed higher bat detection levels than at the GRP site. *Id.*, p.51:7-9. Significantly, Mars Hill post construction data circa 2007 and 2008 reveals low bat mortality rates. *Id.*, p.51:9-11. Thus, Messrs. Gravel and Pelletier have properly concluded that the risk to bats from the GRP site will be low and that it is anticipated that the Project will have no unreasonable adverse effect upon bats. *Id.*, p.51:13-15.

Raptors

Both Mr. Lloyd-Evans and Ms. Linowes were critical of Stantec's diurnal raptor studies because they included only 11 survey days. However, as Messrs. Gravel and Pelletier's supplemental testimony indicates, their sampling effort at the GRP site was consistent with sampling methods used in studies conducted at other wind energy sites in the eastern United States in recent years. Exhibit Pet.14, pp.33:23 to 34:1. The sampling at the GRP site followed HMANA protocols and targeted the period that is considered peak migration and days that would be optimal for migration. *Id.*, p.34:1-5. Thus, Messrs. Gravel and Pelletier disagree with Ms. Linowes and Mr. Lloyd-Evans' position that the fall raptor migration study was inadequate and should be expanded. *Id.*, p.34:16-

18. They assert that even if these studies were expanded one could not assume that the data produced would be any more useful in determining collision risks. *Id.*, p.34:18-20. They also conclude that because overall raptor mortality has been very low at other operational wind projects in the United States outside of California and because the GRP site did not display any unusual raptor passage rates, it is their professional opinion that additional surveys at the site would not change their overall conclusion that the collision risk to migrating raptors at the Project site is anticipated to be low. *Id.*, pp.34:21 to 35:1-3.

This foregoing conclusion is further supported by the Mars Hill, Maine data cited by Stantec. The number of raptors observed during pre-construction surveys at Mars Hill was greater than that observed at the GRP site. Exhibit Pet.14, p.30:15-16. Yet, the post-construction raptor mortality rates observed at Mars Hill were extremely low. There were no raptor fatalities observed at Mars Hill during the 2007 post-construction survey and only one during the 2008 survey. Furthermore, these observations are consistent with publicly available post-construction survey data compiled over the course of nearly 15 years from 13 different projects in the United States which shows that the number of documented fatalities in total are extremely low. *Id.*, pp.30:22 to 31:1. Thus, Stantec's conclusions about the Project's anticipated lack of adverse effects on raptors is reasonable.

Wildlife and Wildlife Habitats

Prefiled testimony of Mr. Will Staats and Ms. Jill Kelly on behalf of the New Hampshire Fish and Game Department ("Fish and Game") and Dr. David Publicover on behalf of AMC expressed concerns about the Project's impacts on high elevation habitat

and the wildlife existing there. To address those concerns, the Applicant, Fish and Game and AMC entered into an agreement entitled "High-Elevation Mitigation Settlement Agreement" ("the Settlement Agreement"), Exhibit Pet.48, the salient terms of which are summarized below.

High-Elevation Mitigation Settlement Agreement

Under the terms of the Settlement Agreement, the Applicant will secure the permanent conservation of approximately 1735 acres of high elevation land through transfer of fee title to Fish and Game. The properties are located on Mount Kelsey, Long Mountain, Muise Mountain and Baldhead Mountain. In addition, the Applicant will make a one-time payment of \$200,000 to Fish and Game for studies of the impacts of the Project on the use of the area by American marten, Bicknell's thrush, and/or other wildlife species of concern. The Applicant will also make another one-time payment to Fish and Game in the amount of \$750,000 to secure or assist with the permanent conservation of comparable habitat outside the Project area. The priority for expenditure of these funds is for projects that secure conservation habitat for American marten or other species of conservation concern, with a focus on high elevation spruce-fir habitat in Coös County. The total dollar value of the Settlement Agreement is approximately \$2.4 million. *See Tr. Day IV*, pp.92:17 to 93:2.

Mr. Staats testified at the hearing that the Settlement Agreement "is adequate mitigation for what impacts we know are going to occur." *Tr. Day VI*, p.82:1-2. Both he and Ms. Kelly testified that the Settlement Agreement provides sufficient mitigation to compensate for the Project's impacts to the high elevation ecosystems, habitats and

species, and resolves any and all concerns they might have regarding the issue of mitigation. *Tr. Day IV*, pp.162:23 to 163:8.

Mr. Pelletier testified that there is great value in the Settlement Agreement and that it provides the necessary balance to unavoidable impacts created by the Project. *Tr. Day IV*, p.19:2-18. Mr. Pelletier also testified that overall habitat value would be greater with the Project and the Settlement Agreement as compared to no Project and no mitigation. *Tr. Day IV*, pp.21:1-5 and 113:16-22. Mr. Pelletier recognized the long-term benefits of avoiding forestry activities that have traditionally occurred in the high elevation area and which would have a greater impact on the species of concern than would the Project and the Settlement Agreement. *Tr. Day IV*, p.19:4-18. He and Mr. Gravel noted that 223 acres of high elevation habitat on Mt. Kelsey had been permitted for cutting and that the Settlement Agreement will prevent that from occurring. *Tr. Day IV*, p.114:10-16.

Mr. Lloyd-Evans stated that cessation of logging in this area is important. *Tr. Day VII*, p.47:11. He also testified that the Settlement Agreement is a very reasonable attempt to replace the habitat of high elevation spruce-fir forests, *Tr. Day VII*, pp.21:21 to 22:3, and that it seems to be a reasonable attempt to set aside some breeding areas for passerine birds and provide better protection from other impacts like logging. *Tr. Day VII*, p.13:10-19.

Dr. David Publicover, a forester with a doctorate in forest ecology from the Yale School of Forestry, testified on behalf of AMC that in his professional opinion, the provisions of the High Elevation Mitigation Settlement Agreement provide sufficient mitigation to compensate for the Project's impacts to high elevation ecosystems, habitats,

and species, and resolves any and all concerns regarding the issue of high elevation mitigation. *Tr. Day IV*, p.208:5-10. Dr. Publicover also testified that it is his professional opinion that with the inclusion of the Settlement Agreement, the Project does not constitute an unreasonable adverse effect on the natural environment as understood by RSA 162-H. *Id.*, p.208:10-15. Dr. Publicover concurs with the supplemental testimony of Mr. Gravel and Mr. Pelletier regarding the benefits of the mitigation plan. *Tr. Day IV*, p.213:8-10. He stated that his professional opinion is that these benefits balance the impacts created by the Project, *Id.*, p.213:10-12, and that in combination with the Settlement Agreement, the Project does not constitute an unreasonable adverse effect on the natural environment. *Id.*, P.213:13-16. In view of all of the foregoing, the record evidence supports an identical finding by the Subcommittee.

Natural Communities and Plant Life

Stantec conducted two rare plant surveys and a natural community characterization to address the Project's potential impacts to rare plant species and natural communities. Exhibit Pet.13, p.28:12-17. The results of these studies are documented in Exhibit Pet.1.2, Appendices 15, 16 and 17. Mr. Gravel and Mr. Pelletier have opined that the Project will not have an unreasonable adverse effect on plant life or natural communities, due to the fact that no rare plant species were found within the Project site during the surveys and in light of the ongoing industrial forestry practices within the Project area. Exhibit Pet.13, pp.29:19 to 30:2. In view of the lack of any expert rebuttal testimony on this issue, the Subcommittee may adopt the Applicant's findings that there is no unreasonable adverse impact from the Project upon natural communities and plant life.

H. The Site and Facility Will Not Have an Unreasonable Adverse

Effect on Public Health and Safety

Section I (6) of the Application contains information regarding the Project's potential impacts on public health and safety. *See* Exhibit Pet.1.1, pp. 87-91. In addition, the Application discusses the issue of "shadow flicker" on pages 69-71. The Applicant also provided several expert witnesses on various issues bearing on the Project's potential risks to public health and safety. As discussed below, the evidence in this case supports a finding that the Project will not have an unreasonable adverse effect on public health and safety.

Public Health and Safety During Construction

The prefiled testimony of Mr. Beaulieu and the supplemental testimony of Mr. LaFrance indicate that there will be no unreasonable adverse effect on public health and safety during construction. Contractors and consultants working on the Project site will be required to abide by applicable health and safety regulations. Exhibit Pet.9, p.6:12-13. The measures proposed by NH DES will also adequately protect the public health and safety. Exhibit Pet.10, p.8:10-12. The Project's remote location where public access can be limited help to insure the public's health and safety are not at risk from construction-related activities associated with construction vehicle traffic, blasting and other activities. Exhibit Pet.9, p.6:13-16.

Shadow Flicker

In addition to the information about shadow flicker contained in the Application (i.e. description of it and the modeling used to evaluate the Project's shadow flicker, as well as maps illustrating the output of the modeling), GRP presented the expert testimony

of Matthew Borkowski. *See* Exhibit Pet.20. Mr. Borkowski's prefiled testimony indicates that the shadow flicker model was run using a "worst case" scenario, meaning that it assumed that the sun is shining all day, every day and that the turbine rotor blade always covers the maximum portion of the sun. Exhibit Pet.20, pp.3:21 to 4:1. Based on this study, Mr. Borkowski concluded that the Project will not have an unreasonable adverse effect on public health and safety as the result of shadow flicker because the nearest year-round residence is approximately 2.9 miles away and is therefore outside of any area where wind turbine shadows would be visible, as referenced in the maps contained in Section I (b) of the Application (i.e. Figures 23 and 24), Exhibit Pet.1.1. Exhibit Pet.20, p.4:3-11. As no party refuted the Applicant's evidence concerning shadow flicker, the Subcommittee must conclude that there is no unreasonable adverse effect upon the public health and safety as the result of the Project's shadow flicker.

Noise

In support of the Application's conclusion that the Project will have no unreasonable adverse impact on public health and safety as the result of the sound it produces, GRP submitted the expert testimony (both oral and prefiled) of David Hessler, a registered Professional Engineer and member of the Institute of Noise Control Engineering. *See* Exhibit Pet. 19. Mr. Hessler's prefiled and oral testimony at the hearing, among other things, discussed the noise assessment/evaluation contained in Appendix 28 of the Application. *See* Exhibit Pet.1.3, Appendix 28. No other party offered prefiled or oral testimony by any expert with Mr. Hessler's qualifications on the issue of noise, and Ms. Linowes was the only party to the proceeding who cross-examined Mr. Hessler.

Based upon his studies, Mr. Hessler's testimony indicated that under worst-case conditions, the Project's sound level will fall to 36 dBA, the measured background level, well before it reaches any of the nearest seasonal cabins and nearest off-site residences, which are at least 2.9 miles to the east, and 3.5 miles to the west. Exhibit Pet. 19, p.4:6-10. In response to a question from the Subcommittee at the hearing, Mr. Hessler testified that the background sound level in the hearing room was approximately 43 dBA. *Tr. Day I*, pp.101:22 to 102:2. He also testified that the sound level in the immediate vicinity of the turbines, i.e. right at the base, is somewhere between 55 and 57 dBA which described as being "not particularly loud" and "certainly not deafening or anything." *Tr. Day I*, p.101:7-16. Mr. Hessler concluded that the Project would not have an unreasonable adverse effect on public health and safety as the result of noise. Exhibit Pet.19, p.4:15-21. While Ms. Linowes' prefiled testimony was critical of Mr. Hessler's noise study, neither she nor any other party offered any testimony, expert or otherwise, to refute Mr. Hessler's conclusion that the Project's sound will not have an unreasonable adverse impact on public health and safety. Accordingly, the weight of the evidence on this issue supports the Application's contention that the Project will have no unreasonable adverse effect on public health and safety as the result of noise.

Ice Shedding

The prefiled and oral testimony of Daniel Mandli establishes that the Project will not pose an unreasonable risk to public health and safety as the result of ice shedding. Mr. Mandli testified that the turbine model that the Project proposes to use, the Vestas V90, shuts itself down when it senses ice on its rotors. *Tr. Day I*, p.122:1-3. As Mr. Mandli stated in his prefiled testimony, "Noble takes careful measures to mitigate any

safety risks associated with operating wind turbines by appropriately siting turbines away from residences and public roads.” Exhibit Pet.7, p.8:9-11. Mr. Mandli explained that ice shedding mostly occurs within one rotor diameter of the turbine, i.e. less than a 300 foot diameter, and that since the Project’s setbacks from roads and residences is greater than this distance, there is no public health risk from ice shedding. Exhibit Pet.7, p.8:22-24.

The Application recognizes that there may be risks to the general public from ice shedding in those areas where public access exists in the form of cross-country ski trails and snowmobile trails in close proximity to the wind turbines. Exhibit Pet.1.1, p.88. To mitigate that risk, the Applicant proposes to install signs at appropriate trail junctions or headers to warn users of potential ice shedding risks. *Id.* Trained maintenance technicians will also enforce procedures aimed at minimizing risk to the general public, such as closing and locking Project gates, particularly in the winter. *Id.* In addition, pursuant to the High-Elevation Mitigation Settlement Agreement, Exhibit Pet.48, GRP will take commercially reasonable efforts to restrict motorized public access on all gated turbine access roads above 2700 feet in elevation. Exhibit Pet.48, sec. A.9.

Tower Collapse/Blade Throw

The above-referenced public safety measures also provide protection against public health and safety concerns relating to tower collapse and blade throw. The remote locations of the turbines effectively mitigate public safety concerns associated with tower collapse and blade throw. At the hearing, Mr. Mandli provided testimony about a turbine⁷ collapse that recently occurred at Noble’s Altona, New York wind facility. He

⁷ It should be noted that the turbine that collapsed in Altona is a GE turbine, while the Project’s turbines are Vestas V-90s.

stated that the incident is under investigation and described the steps taken by Noble in response to the incident, e.g., securing the site and calling the fire department. *Tr. Day I*, pp.70:15 to 73:22.

Fire

Prior to building any projects, Noble establishes an emergency response program dealing with fire and rescue issues. *See Tr. Day I*, p.75:15-19. GRP is currently engaging in discussions with Coös County regarding the development of a fire and emergency response plan. *Tr. Day I*, p.265:9-14. Part of the Project's fire protection and safety measures is to monitor every turbine 24 hours a day, 7 days a week at Noble's Monitoring Center in Plattsburgh, New York. *Tr. Day I*, pp.78:20 to 79:4. In addition, technicians who can get to the site within 15 minutes are employed locally. *Tr. Day I*, p.79:16-18. These monitoring and response functions, coupled with the fire and emergency response conditions in the Coös County agreement will assure that the public health and safety risk posed by a fire will be appropriately addressed. In fact, the Milan Captain of the Fire Department spoke in favor of the Project at the public hearing. *Tr. Day VII*, p.44:1-7.

Lightning and Stray Voltage

Mr. Mandli testified at the hearing that lightning strikes will not typically shut down turbines. *Tr. Day I*, p.254:13-14. Mr. Mandli's prefiled testimony indicates that lightning strikes do not pose a public safety risk because the lightning protection system on modern wind turbine generators dissipates lightning safely to ground, thereby protecting the collection system and any nearby structures from damage caused by lightning strikes to the turbine. Exhibit Pet.7, p.8:11-15. In addition to providing

protection against damage from lightning strikes, properly grounded wires eliminate the occurrence of stray voltage. Exhibit Pet.1.1, p. 89.

Hazardous Materials

The only hazardous material used in the operation of a wind energy facility is lubricating and waste oil, which will be contained in accordance with the Project's spill prevention control and countermeasures plan ("SPCC"). Exhibit Pet.7, p.8:16-20. NH DES has required that the Applicant prepare and submit the SPCC to DES for review and approval at least 90 days prior to the installation of the first turbine. See Exhibit Pet.39., sec. E-10.

Aviation Safety

The Project's potential risks to aviation safety and the steps it plans to address those risks are set forth on pages 89 and 90 of the Application, Exhibit Pet.1.1. GRP applied for and received from the Federal Aviation Administration ("FAA") a Determination of No Hazard to Air Navigation for all 33 turbines. See Exhibit Pet.2.2, Appendix 41. The Applicant has recently discovered that due to a clerical error, the Applicant provided erroneous turbine height information to the FAA. See Revised Petitioner Exhibit 43. GRP will be correcting this error, *id.*, but does not anticipate that the FAA's Determination of No Hazard to Air Navigation will change. The Applicant will install lighting on the turbines as required by the FAA, see Exhibit Pet.1.1, p.90; see also Exhibit Pet.1.3, Appendix 27 (FAA Advisory Circular) and will comply with all other FAA requirements.

Proposed Agreement Between Coös County and GRP

The Applicant has proposed to enter into an agreement with Coös County covering several issues, many of which are intended to provide public safety measures either similar or in addition to those mentioned above. The Applicant has included the proposed agreement in Attachment A, the list of conditions it is proposing to the Subcommittee. For example, the proposed agreement addresses subjects such as warning signs, project security, emergency response, spill protection, and restrictions on the use of herbicides or pesticides for maintaining clearances around the turbines or for any other maintenance at the Project. The proposed agreement with the County also provides for project decommissioning when and if it ceases to be functional, as well as the provisions of security to cover such costs. In many respects this agreement concurs with and includes recommendations from the AMC on this issue. In the event that GRP is unable to sign a written agreement with Coös County prior to the time the Subcommittee issues its decision in this instant action, GRP is willing to accept as conditions to its SEC permit those terms and conditions contained in the proposed Agreement with Coös County submitted herewith. Thus, when added to all of the foregoing information, the conditions in the proposed agreement with Coös County insure that the Project will not have an unreasonable adverse effect on public health and safety.

I. The Operation of the Site and Facility is Consistent with the State Energy Policy

RSA 162-H:16, IV(d) requires a finding by the Subcommittee that the Project's operation is consistent with the state energy policy established in RSA 378:37 which provides as follows:

The general court declares that it shall be the energy policy of this state to meet the needs of the citizens and businesses of the state at the lowest reasonable cost while providing for the reliability and diversity of energy sources; the protection of the safety and health of the citizens, the physical environment of the state, and the future supplies of nonrenewable resources; and consideration of the financial stability of the state's utilities.

The Project's positive effects on air quality and its other effects on the public health, safety and the environment are noted above. The Application, Exhibit Pet.1.1, pp.100-102, provides a description of why this Project will be consistent with this policy. The prefiled testimony of Pip Decker and Charles Readling (adopted by Mark Lyons), Exhibits Pet.3, pp.9:21 to 10:22, supports this as well. Diversity and reliability of energy sources are declared to be an important aspect of the state energy policy. Clearly, adding a 99 MW wind park to NH's resource mix will contribute toward diversity of energy sources.

According to the NH PUC 2007 Biennial Report, our state currently has approximately 4226 MW of capacity comprised of the following electric generation resources: gas (30%); nuclear (29%); coal (14%); hydropower (12%); residual fuel oil (9%); biomass (2%); distillate fuel oil, jet fuel and others, including wind, (4%).⁸ NH only has 24 MW of wind power capacity from the Lempster project. The GRP Project will increase the diversity of the state's electric generation resource base and, because wind energy generation does not depend on the fuel availability required by most of the state's generators, it will enhance the reliability of New Hampshire's generation portfolio. The energy policy statute talks about protecting the health of citizens and the physical environment. There are no emissions from a wind park; thus it protects health and the physical environment by producing electricity in a way that benefits both. The

⁸ The Applicant requests that the Subcommittee take official notice of this report pursuant to RSA 541-A:33,V.

statute also declares protecting future supplies of nonrenewable resources to be an important part of the policy. Since a wind park provides electricity without using nonrenewable resources, it will help preserve these future supplies. The energy policy also talks about lowest reasonable costs. Because a wind park is a “price taker” in the competitive New England power market and it does not set the regional price of electricity, this facility will not increase power costs.

In view of the foregoing, the Applicant has demonstrated that the Project is consistent with and directly supportive of the state’s energy policy.

V. CONCLUSION

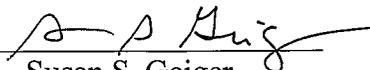
Based on the information contained in the record of this proceeding and for all of the reasons set forth above, the Applicant has demonstrated by a preponderance of the evidence that the Project meets the statutory criteria for a certificate of site and facility. Therefore, the Applicant respectfully requests that the Subcommittee issue a certificate of site and facility for the Granite Reliable Power, LLC Wind Project subject to the conditions contained in the letter from the Water Division of the New Hampshire Department of Environmental Services (Exhibit Pet.39-41), the conditions set forth in Applicant’s agreements with the Town of Dummer (Exhibit Pet.2.2, Appendix 47), the High Elevation Mitigation Plan marked as Exhibit Pet.48, the [Proposed] Agreement between the County of Coös and Granite Reliable Power, LLC regarding operation and decommissioning which have been incorporated into Attachment A, and the other proposed conditions attached to this Post-hearing Brief as Attachment A.

Respectfully submitted,

Granite Reliable Power, LLC

By and through its Attorneys,
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By: 
Douglas L. Patch

By: 
Susan S. Geiger

April 10, 2009

Certificate of Service

I hereby certify that on this 10th day of April 2009, copies of the within Brief were sent to persons named on the Service List either by electronic mail or first class mail, postage prepaid.


Douglas L. Patch

THE STATE OF NEW HAMPSHIRE
SITE EVALUATION COMMITTEE

Docket No. 2008-04
Re: Application of Granite Reliable Power, LLC
For A Certificate of Site and Facility
To Construct And Operate
The Granite Reliable Power Windpark

ATTACHMENT A
APPLICANT'S PROPOSED CONDITIONS

- A. The NH Department of Environmental Services conditions for the 401 Water Quality certificate, Wetlands permit, and Alteration of Terrain permit dated February 10, 2009 and marked as Exhibit Pet. 39, 40 and 41.
- B. The High Elevation Mitigation Plan marked as Exhibit Pet. 48.
- C. Conditions agreed to by the Town of Dummer and Granite Reliable Power, LLC marked as Exhibit Pet. 2.2, Appendix 47.
- D. Avian Species protection
 - a. The Project shall conduct post-construction avian and bat mortality surveys similar to those implemented at other constructed wind projects in the United States, using protocols generally outlined below. The purpose of the surveys will be to provide a quantitative analysis of the level of direct mortality occurring as a result of the operation of the project. Surveys will be conducted for a period of three years following commercial operation of the project, from April 15 through October 15, to include both spring and fall migration seasons.
 - b. A final detailed study protocol will be provided to the Fish and Game Department for review prior to construction. The basic outline of the study protocol is provided below. This protocol is based upon numerous past and ongoing studies at operating wind energy facilities in the Northeast and elsewhere throughout the United States.
 - i. The avian and bat mortality study will occur for three years following commercial operation.
 - ii. The study will consist of weekly (every 7 days) searches at approximately 50% (16) of the turbines for a period from April 15 through October 15.

- iii. The 16 turbines will be chosen at random, ensuring coverage of all available habitats (forested, shrub, open land) within the project area.
 - iv. The study will include searcher efficiency and scavenge rate tests during both the spring and fall seasons. Separate tests will be used for birds and bats. The results of these tests will be used to refine the total mortality estimates.
 - c. A report will be provided to NHDES and NHFG after each full year (spring-fall) of monitoring. The report will summarize the methods and results of monitoring. The yearly summary reports will be provided to the Department of Environmental Services and the Fish and Game Department.
 - d. If, after notice and opportunity to be heard, the Site Evaluation Committee determines that the Project is having an unreasonable adverse impact on any avian species; it may take appropriate action within its jurisdiction. This may include a request for extended studies or development of an adaptive management program to reduce the magnitude of impacts.
 - e. This condition is not intended, nor shall it be deemed to constitute, a permit to take any species or as a waiver of any entity of its enforcement rights and powers under the federal Migratory Bird Treaty Act or any other applicable law.
- E. The Applicant shall not commence construction, as "commencement of construction" is defined in RSA 162-H:2, III, until such time as construction financing is in place. Nothing in this condition or in this order shall prohibit the owners of the land on which the Project is to be constructed from continuing with logging activities in areas below 2700 feet in elevation.
- F. Areas above 2,700 feet in elevation will be revegetated in accordance with a plan to be developed by GRP in consultation with NHFG. This plan will address reestablishment of endemic species, including spruce and fir, within the restored right-of-way. The plan will include provisions for planting of seedlings and application of organic matter to best support a successful restoration effort. .
- G. The Applicant shall hire an independent engineer/environmental monitor to monitor the construction of the Project. This monitor shall have full authority to immediately stop work if the construction is being performed contrary to plans, permit conditions, the order of the Committee, or if the activity observed will cause imminent undue harm to the environment. The monitor will keep a log of all noncompliances and the steps taken to rectify them. The monitor shall provide copies of any reports periodically to the permitting agencies, as necessary.

H. The Agreement between the County of Coös and Granite Reliable Power, LLC regarding operation and decommissioning will be submitted by the County to the NH Site Evaluation Committee. The Applicant recommends that it be included among the conditions. For now the Applicant has attached to these conditions the proposed Agreement with the County of Coös and notes that this has been modified from the draft agreement that is in the record as Appendix 53 to Volume 6, Exhibit Pet. 2.2.

**PROPOSED AGREEMENT BETWEEN
County of Coös and Granite Reliable Power, LLC**

WHEREAS, Granite Reliable Power, LLC (GRP) is proposing to construct and operate a 99 MW wind energy facility ("Project") in Coös County, New Hampshire, and

WHEREAS, GRP has submitted an application for Certificate of Site and Facility for the Project to the New Hampshire Site Evaluation Committee (NHSEC), and

WHEREAS, the County of Coös ("County") desires that GRP comply with the following provisions regarding operation and potential decommissioning of the Project, and

WHEREAS, the County and GRP desire that the NHSEC adopt these provisions as conditions and incorporate them into any certificate it may grant GRP for the Project,

NOW THEREFORE on the ___ day of _____ 2009, Granite Reliable Power, LLC (GRP) and the Board of Commissioners of Coös County's Unincorporated Places on behalf of Coös County (County) hereby agree as follows:

1. Warnings. A clearly visible warning sign identifying danger from voltage shall be placed at all electrical collection facilities, switching or interconnection facilities, and substations.

Visible, reflective, colored objects, such as flags, reflectors, or tape shall be placed on all anchor points of guy wires, if any, and along the guy wires up to a height of ten feet from the ground.

A clearly visible warning sign concerning safety risks related to winter or storm conditions shall be placed no less than 300 feet from each wind turbine tower base on access roads.

2. Access. The County or its designee(s) shall have access to the Project Site for the purpose of emergency response. GRP shall provide access to the Project Site, Wind Turbines or other facilities upon request of the County to ensure compliance with the provisions of this agreement.

3. Liability Insurance. GRP or its successor(s) shall maintain a current general liability policy covering bodily injury and property damage with limits of at least \$10 million in the aggregate. Certificates shall be made available to the County upon request. Proof of insurance to be provided by GRP or its successors annually on or about March 15th of each calendar year. Any deductibles to above

insurance must be covered by adequate reserves. Proof of such reserves will be provided to the County annually or about March 15.

4. Indemnification. GRP specifically and expressly agrees to indemnify, defend, and hold harmless the County and its officers, elected officials, employees and agents (hereinafter collectively "Indemnitees") against and from any and all claims, demands, suits, losses, costs and damages of every kind and description, including attorneys' fees and/or litigation expenses, brought or made against or incurred by any of the Indemnitees resulting from or arising out of any negligence or wrongful acts of the GRP, its employees, agents, representatives or Subcontractors of any tier, their employees, agents or representatives in the connection with the Project. The indemnity obligations under this Article shall include without limitation:

- a. Loss of or damage to any property of the County, GRP or any third party;
- b. Bodily or personal injury to, or death of any person(s), including without limitation, employees of the County, or of GRP or its Subcontractors of any tier.

The GRPs indemnity obligation under this Article shall not extend to any liability caused by the sole willful negligence of any of the Indemnitees.

5. Wind Turbine Equipment and Facilities

a. Visual Appearance

- Wind turbines shall be a non-obtrusive color such as white, off-white, or gray.
- Wind turbines shall not be artificially lighted, except to the extent required by the Federal Aviation Administration or other applicable authority that regulates air safety.
- Wind turbines shall not display advertising, except for reasonable identification of the turbine manufacturer and/or GRP or its successors.

b. Controls and Brakes

- All wind turbines shall be equipped with a redundant braking system. This includes both aerodynamic over-speed controls (including variable pitch, tip, and other similar systems) and mechanical brakes. Mechanical brakes shall be operated in a fail-safe mode. Stall regulation shall not be considered a sufficient braking system for over-speed protection.

c. Electrical Components

- All electrical components of the Project shall conform to relevant and applicable local, state, and national codes, and relevant and applicable international standards.

6. Project Security.

- a. The exterior of wind turbine towers shall not be climbable up to fifteen (15) feet above ground surface.
- b. All access doors to wind turbines and electrical equipment shall be locked or fenced, as appropriate, to prevent entry by non-authorized persons.

7. Public Information, Communication and Complaints.

- a. Public Inquiries and Complaints. During construction and operation of the Project, GRP shall maintain a phone number and identify a responsible person for the public to contact with inquiries and complaints through completion of decommissioning. GRP shall make reasonable efforts to respond to the public's inquiries and complaints.
- b. Complaint Resolution. GRP shall develop and submit to the County a process to resolve complaints concerning the construction or operation of the Project. The process shall not preclude the local government from acting on a complaint.
- c. Signs. Signs shall be reasonably sized and limited to those necessary to identify the Project Site and provide warnings or liability information, construction information, or identification of private property. There will be no signs placed in the public right of way.

8. Emergency Response

- a. Upon request, GRP shall cooperate with the County's first responders and any emergency services that may be called upon to deal with a fire or other emergency at the Project. GRP will develop and coordinate implementation of an emergency response plan for the Project. GRP and County will establish protocols to provide emergency response access to the Project Site within a reasonable time following an alarm or other request for emergency response.
- b. GRP shall cooperate with the County's emergency services to determine the need for the purchase of any equipment required to provide an adequate response to an emergency at the Project that would not otherwise need to be purchased by the County. If agreed between the County and GRP, GRP shall purchase any specialized equipment for storage at a mutually agreeable location. The

County and GRP shall review together on an annual basis the equipment requirements for emergency response at the Project.

- c. GRP shall provide and maintain protocols for direct notification of emergency response personnel designated by the County.
- d. GRP shall provide the County with contact information of personnel available at every hour of the day.
- e. GRP shall provide training to emergency response personnel identified by the County. Those identified for training will include First Alarm mutual aid responders. Training shall be conducted at times agreed to by the County and GRP prior to the commencement of construction and on an annual basis during operation of the Project. The training shall include, but not be limited to, the location and operation of on-site fire suppression equipment, Project Site and Wind Turbine access, and communication protocols.
- f. GRP shall maintain smoke and/or fire alarm systems that are installed in all Wind Turbines and facilities. The County or its designee(s) and GRP shall work to identify sources of water on or around the Project Site that may be utilized in the event of a fire at the Project Site outside the Wind Turbines, and collaborate on a process for utilizing the identified sources. The cost of identifying these water sources, if any, shall be borne by GRP.

9. Public Roads.

- a. GRP shall identify all state and local public roads to be used within the County to transport equipment and parts for construction, operation or maintenance of the facility.
- b. GRP shall hire a qualified professional engineer, approved by County, to document road conditions prior to construction and again thirty days after construction is completed or as weather permits.
- c. Any road damage caused by GRP or its contractors at any time shall be promptly repaired at the GRP's expense.
- d. GRP will reimburse the County for costs associated with special details caused directly by a need to direct or monitor traffic within the County limits during construction.

10. Construction Period Requirements

- a. Site Plan. Prior to the commencement of construction, GRP shall provide the County with a copy of the final Soil Erosion and Sediment Control site plans showing the construction layout of the Project.
- b. Construction Schedule. Prior to the commencement of construction activities at the Project, GRP shall provide the County and if required, the State of New Hampshire Department of Transportation and/or Department of Safety, with a schedule for construction activities, including anticipated use of public roads for the transport of oversize and overweight vehicles. GRP shall provide updated information and schedules regarding construction activities to the County on a monthly basis, or upon request of the County.
- c. Disposal of Construction Debris. Tree stumps, slash and brush will be disposed of onsite or removed consistent with state law. Construction debris shall not be disposed of at County facilities.
- d. Blasting. The handling, storage, sale, transportation and use of explosive materials shall conform to all state and federal rules and regulations.
- e. Storm Water Pollution Control. GRP shall obtain a New Hampshire Site-Specific Permit and conform to all of its requirements including the Storm Water Pollution Prevention Plan and requirements for inspections as included or referenced therein. GRP shall provide the County with a copy of all state and federal storm water, wetlands, or water quality permits and related conditions.
- f. Construction Vehicles
 - Construction vehicles shall only use a route approved by the New Hampshire Department of Transportation (NHDOT). There shall be no staging or idling of vehicles on public roads. The NHDOT shall be notified at least 24 hours before each construction vehicle with a Gross Vertical Weight greater than 88,000 pounds is to use a State road. Acceptance by the State of vehicles exceeding this level is not a waiver of the GRP's obligation to repair all damage to roadways caused by vehicles used during construction or during any other time through the completion of decommissioning.
 - The start-up and idling of trucks and equipment will conform to all applicable Department of Transportation or Department of Safety regulations.

11. Operating Period Requirements

a.. Spill Protection

GRP shall take reasonable and prudent steps to prevent spills of hazardous substances, including but not limited to oil and oil-based products, used during the construction and operation of the Project. This includes oil, gasoline, and other hazardous substances from construction related vehicles and machinery, permanently stored oil, and oil used for operation of permanent equipment. GRP shall provide the County with a copy of the Spill Prevention, Control and Countermeasure (SPCC) Plan for the Project as required by state or federal agencies.

- b. Signal Interference. GRP shall make reasonable efforts to avoid any disruption or loss of radio, telephone, television, or similar signals, and shall mitigate any harm caused by the Project, subject to the Complaint Resolution process.

12. Decommissioning.

Anticipated Life of Wind Turbines

Megawatt-scale wind turbines are designed and certified by independent agencies for a minimum expected operational life of 20 years.

As the wind turbines approach the end of their expected life, it is expected that technological advances will make available more efficient and cost-effective generators that will economically drive the replacement of the existing generators.

a. Trigger for Implementing Decommissioning Plan.

Decommissioning will be required if the Project has not generated electricity for a period of three hundred and sixty-five (365) consecutive days, unless GRP or its successor produces evidence of mitigating circumstances, including delays surrounding long lead time for spare part procurement or an act or condition outside of GRP's control. Decommissioning and restoration activities will adhere to the requirements of appropriate governing authorities and will be in accordance with applicable federal, state and local permits and/or conditions.

b. Description of Decommissioning Work

i. Wind Turbine Removal.

Turbine and tower removal will be dismantled and removed in the reverse of the erection sequence, as follows:

- Assemble and stage crane on pad at turbine;
- Install erosion control measures as required;
- Disconnect electrical connections;
- Remove rotor and block on ground;
- Disassemble rotor;
- Remove nacelle and set on ground;
- Remove turbine tower sections and stage on ground;
- Remove electrical down tower assembly;
- Haul off turbine components;
- Remove foundation to 2 feet below grade;
- Backfill foundation;
- Rehabilitate disturbed areas.
- Leaks of petroleum, oils, or other hazardous materials will be remediated.

Wind turbines will be dismantled using standard best management practices. Critical lift plans will be developed specifically for each major turbine component. The components will be removed from the site and transported to appropriate facilities for reconditioning, salvage, recycling, or disposal. Depending on the ultimate destination, some components may need to be disassembled on-site to maximize reuse or ensure compliance with applicable disposal regulations.

ii. Other facilities.

Foundations, anchor bolts, rebar, conduit, and other subsurface components will be removed to a minimum 2 feet below grade. Items not known to be harmful to the environment buried greater than 2 feet below grade may be left in place or removed, at GRP's sole discretion. Once removal is complete the excavation will be backfilled with material of quality comparable to the immediate surrounding area. The disturbed soils of the site will be rehabilitated, including appropriately regrading and reseeding the area.

The Project collector system, substation, and interconnection facilities will be removed and salvaged, recycled, or repurposed to the maximum extent economically practicable, providing that applicable regulations and permit conditions are followed. Any other components will be hauled to approved disposal sites. Any trenches or holes that remain after removal will be backfilled, and the surface areas will be rehabilitated.

Construction pads will be rehabilitated and reseeded. Road shoulders will be revegetated to a width of 12 feet. Culverts will remain in place.

Site restoration will include, as reasonably required, leveling, terracing, mulching, and other steps necessary to prevent soil erosion to ensure establishment of suitable vegetation.

c. . Estimate of Decommissioning Costs.

Detailed site-specific estimates of the following decommissioning costs and salvage values (Total Estimated Net Decommissioning Cost) will be provided to the County prior to commencement of Project construction, and updated every five (5) years thereafter. GRP agrees that submittal of its initial estimate of net decommissioning costs hereunder shall be a precondition to the commencement of construction of the Project. Decommissioning cost estimates provided prior to construction and at five (5) year intervals will be subject to review and approval by the County, and such approval will not be unreasonably withheld, conditioned and/or delayed. Decommissioning cost estimates agreed to by the County will be signed by both parties to this Agreement and attached as an Amendment at any such times that the costs are revised.

Turbine equipment removal (per turbine)

- Remove blades and hub
- Remove nacelle
- Dismantle and remove tower
- Foundation removal
- Backfill and restoration
- Total per turbine
- Collection, substation and roads
 - Overhead collection removal
 - Underground collection removal

- Substation removal
- Road shoulder revegetation
- Meteorological tower and maintenance building removal

d. Ensuring Decommissioning and Site Restoration Funds

The project will ensure that financial assurance (in a form acceptable to the County) for Total Estimated Net Decommissioning Cost ("Decommissioning Fund") will be fully established within the first ten (10) years following completion of construction of the Project. At the discretion of the County, an additional study may be commissioned to update the Total Estimated Net Decommissioning Cost in any five year period, which will replace the then current cost estimate. The cost of the study shall be borne by GRP or its successors. On or prior to December 31 of each year, in years 1-10 of the project's operation, ten percent of the Total Estimated Net Decommissioning Cost will be secured in a form acceptable to the County. The Year 10 payment shall be adjusted as may be necessary to ensure that the total amount in the Decommissioning Fund at the end of year 10 is equal to the most recent estimate of total net decommissioning costs. Prior to the establishment of the full Decommissioning Fund at the end of year 10, GRP shall on an annual basis provide the County with proof (through insurance or other means) of its financial ability to carry out decommissioning should it be required prior to year 10.

Upon complete decommissioning of the site, any remaining balance in the Decommissioning Fund shall be returned to GRP or its successor.

These decommissioning cost security provisions shall be binding upon any successor to GRP.

This is agreement is subject to GRP or its successors providing to the County the detailed estimate of costs for decommissioning, found on page eight (8) of this agreement prior to the commencement of any phase of Project Construction.

IN WITNESS WHEREOF, the parties have caused this agreement to be executed.

COÖS COUNTY, NEW HAMPSHIRE

Burnham A. Judd, Chairman

Paul R. Grenier, Vice-Chair

Thomas M. Brady, Clerk

Granite Reliable Power, LLC

By: _____

Title:

Date: