

**STATE OF NEW HAMPSHIRE
SITE EVALUATION COMMITTEE**

**APPLICATION OF GROTON WIND, LLC
NO. 2010-01**

CLOSING MEMORANDUM AND PROPOSED CONDITIONS

Counsel for the Public, by his attorneys, the Office of the Attorney General, hereby presents this Closing Memorandum and Proposed Conditions to the Application of Groton Wind, LLC for a certificate of site and facility. In closing, Counsel for the Public avers that the Applicant has not met its burden with respect to the project's impacts on wildlife and with respect to its impacts on historic properties. Counsel for the Public also avers that certain conditions are required to insure that the noise impacts of the project do not interfere with the public health and safety of the residents of the area where the project will be located. In support hereof, Counsel for the Public respectfully represents as follows:

1. Pursuant to RSA 162-H:16 the applicant must show by a preponderance of the evidence that the project will not have an unreasonable adverse impact upon the natural environment and upon historic properties.

2. Counsel for the Public was appointed by the Attorney General pursuant to RSA 162-H:9 to represent the public interest and assure that the project presents an appropriate balance between environmental effects and energy production. Counsel for the public has all the rights of an intervenor.

3. Energy Production. While the project has a nameplate capacity of 48 mw, ISO New England may give credit for only approximately 4-5 mw. Transcript Day 1 – PM at 9.

There is no solid evidence presented by the Applicant that there is either a need for additional generation in New Hampshire, that the power produced by the facility will be used and available in New Hampshire or that it will make a meaningful contribution to any perceived need. Instead, the power from the facility has already been sold to an out of state merchant. Nevertheless, the project is estimated to produce some power and that production must be measured against the environmental impacts.

That said, the Applicant intends to use tax subsidy programs and other beneficial tax treatment as part of its financial model. While it is not clear whether the completion of this project depends upon the continued availability of the tax credit programs, Transcript Day 2, AM, 26-30, 32-39 and 42, there is a question as to whether those programs will exist. As such, it behooves the Committee to consider a condition similar to that recently imposed by the Committee on the Brookfield Power application. *See* Brookfield Renewable Power, SEC no. 2010-03, Order dated Feb. 8, 2011, at 16-17, 20 (completion of construction condition).

4. **Avian Species.** The Applicant's expert repeatedly testified that there is no correlation between the results of pre-construction studies and the subsequent outcome of post-construction mortality. *E.g.* Transcript Day 4 --AM at 12 (Adam Gravel: preconstruction studies are "meaningless in terms of quantifying post-construction risk.") Nevertheless, using totem pole logic, the Applicant asserts without support that the project is *low risk* because the limited amount of information from other northeast or New England projects shows what the Applicant believes are relatively low levels of mortality. *See*

Transcript Day 4 --AM at 43-44, 49.¹ The Applicant cannot, however, assure the Committee that there will be no adverse impact on listed species as one of its own reports, *see* PC-5 (Curry & Kerlinger Report), and as the Wind Turbine Guidelines Advisory Committee report dated March 4, 2007, suggest should be the proper assessment criteria. *Id.* at 43-44, PC-14 at 40-41 (“Results of tier 3 [preconstruction studies] should provide a basis for identifying measures to mitigate significant adverse impacts predicted for species of concern.”). *See* PC-21 at 9592 (new guidelines drop the word “significant “ and only use “adverse effect”). Applicant’s expert only opines that he believes based on the limited information available from other projects alone, and eschewing recommended scientific approaches for robust preconstruction studies, modeling and risk assessment, that the risk is low. The thinly supported determination of “low risk” regrettably then becomes the driver for everything else – from the scoping of the preconstruction studies, to the site selection and finally the post construction mortality scoping.

Unfortunately, another way the Applicant arrives at this low risk assessment is by redefining terms so that terms have the meanings the Applicant needs or become inapplicable and, for example, endangered falcons that hunt at and fly over the site do not “use” it and thus the risk to them is discounted. Transcript Day 3 – AM at 33. Similarly, according to the Applicant migrating eagles and other listed species seen migrating in significant numbers over the site are not on a “migration corridor” and thus not entitled to the recommended and

¹ Or, perhaps, “turtles all the way down.” *See Rapanos v. U.S.*, 547 U.S. 715, 754 & n.14 (2006) (Scalia, J.).

protective approaches espoused by the U.S. Fish and Wildlife Service. *See* PC-24 at 21-22 & 36 (definition of “migration corridor”); Transcript Day 6 -- PM at 70 (questioning the definition of migration corridor); Application Appendix 32 “2009 Avian and Bat Surveys” (measuring migration of birds and raptors over project site – if this were not a migration route why did they do it?); *but see* Granite Reliable, Application Appendix 21 at 30 (Mr. Gravel opining that NH migrating raptors follow mountainous topography in broad fronts and concentrated movements). Despite the Applicant’s expert’s unwillingness to see the site as being in a migration corridor, the Applicant’s own focus on it, the information received by the Committee in previous cases, and the definition used by USFWS in PC-24 suggest otherwise. And clearly under that definition and the proposed guidelines, the site would be considered “Category I – high risk to eagles/potential to avoid or mitigate impacts is low.” PC-24 at 21-22. Finally, despite his admission that he had only a “limited ability to understand the risk” and a lack of knowledge of populations or what might be a biologically significant impact, the Applicant’s expert nonetheless asserted that “potential risk” did not equal “likely to be at risk.” Transcript Day 3—PM at 13-27, 29, 40. Such does not inspire confidence.

The circumstances create a quandary for the Committee and the Applicant. With little applicable data or science the Applicant’s expert believes that since other projects have not shown an early tendency to be especially harmful that therefore this one should be no

different.² But a logical fallacy should not be the basis for a decision that the Applicant has met its burden, especially in the light of Mr. Lloyd-Evans' testimony to the contrary. A nearly identical problem was recently faced by the Committee with the Granite Reliable project. There, the Committee reasoned that since there was no way to correlate pre-construction surveys to post-construction impacts, the best evidence was Mr. Lloyd Evans' recommendation that three years of robust scientifically faithful post-mortality studies be conducted. Mr. Lloyd-Evans made the same recommendation in this case for the same reasons. Transcript Day 4-- PM at 19, compare with *Decision Granting Certificate of Site and Facility With Conditions*, dated July 15, 2009, *In re Granite Reliable Power*, SEC no. 2008-04, at 55. In its decision in *Granite Reliable*, the Committee held,

The Subcommittee recognizes, as testified to by Dr. Lloyd Evans, that preconstruction studies serve as baseline studies and have no predictive value as to the actual effect on the various wildlife species. Thus, it is important that the Applicant conduct similar post-construction studies in order to obtain a measure of the actual effect of the project on the wildlife in the area. Therefore, the Applicant shall implement a postconstruction bird and bat mortality study designed by its consultants and reviewed and approved by NHF&G. The study should be conducted for three consecutive years and a full report and analysis should be produced after each complete year. In addition, the Applicant will be required to conduct post-construction breeding bird surveys that replicate the pre-construction surveys for the project site. NHF&G shall review and approve the protocols for said studies. The post construction studies must occur one year, three years, and five years after construction has been completed. If the Applicant and NHF&G cannot achieve consensus on such studies then either party may petition the Committee for a determination.

Granite Reliable Decision at 55.

² Lempster, for example, has only just over 2 years of operating history and only one post-construction mortality study.

It is also consistent with providing a level playing field to competitors in the state that they all be subject to the same conditions when faced with similar problems.³

The Applicant's Avian and Bat Protection Plan is not in accord with the condition in GRP and not fully consistent with the industry wide guidelines and it is clear that even if they were, the interpretation of them by the Applicant is less than clear. Transcript Day 4 – AM at 15-21 (attempting to explain differences and falling down on interpretation); Transcript Day 3—PM at 29-30, 35. What is clear is that the most that can be expected is that a single scientifically valid study will be done which will be followed by an uncertain level of opportunistic observation by project employees with static reporting to the Fish & Game Department. Transcript Day 4 – AM at 27 (Q: what happens with the information collected? A: “That one I’m not sure. You’d have to ask the Applicant on that one.”) & 37, 58-59 (unclear description of how ABPP is intended to operate); Transcript Day 3 – PM at 29-30, 35. In stark contrast, however, the USFWS is interested in uniform and scientifically reliable data for making quantifiable and defensible risk assessments. *See* PC-21 at 9591 (guidelines designed to “encourage scientifically rigorous survey, monitoring, assessment and research designs proportionate to the risk” and to foster a “consistent and predictable approach”); PC-23 at 9529 (same); *see* Transcript Day 4 – AM at 85 (Mr. Gravel agreeing that opportunistic ABPP approach is not scientifically valid). USFWS’ recommended method and the Granite Reliable Decision and Order also both require actual interaction with

³ An officer of Brookfield Renewable told Counsel for the Public in December 2010 that he was happy to learn that Counsel for the Public advocated for the same condition in this case for this very reason.

regulators to interpret the information collected and devise appropriate mitigation plans. The Applicant's approach, in contrast, is to submit information and reports and do nothing unless the agency affirmatively responds and engages. Perhaps, as more consistent and reliable data is collected over a scientifically defensible time period, then the experientially based "low risk" assessments offered by Mr. Gravel could carry some weight. But as long as the industry eschews scientific rigor and rests upon the nearly anecdotal kinds of assessments that they do to assert that these projects are "low risk", the Committee should insist upon valid scientific risk assessment approaches.

It does not therefore appear that the Applicant's ABPP, to the extent it is understood and binding, is a sufficient means for providing rigorous and reliable information collection. Moreover, with respect to eagles at least and perhaps other listed species, it is at odds with protocols recommended by the leading regulatory agency in the Nation on the issue – the USFWS. *See* PC 21, 22, 23 and 24. As such, Counsel for the Public asks that the Committee impose the same condition that was imposed upon Granite Reliable in the July 2009 *Decision*, which read,

Further Ordered that, the Applicant shall implement a post-construction bird and bat mortality study designed by its consultants and reviewed and approved by NHF&G. The study should be conducted for three consecutive years, and a full report with analysis should be produced after each complete year...

In re Granite Reliable Power, SEC no. 2008-04, *Order and Certificate of Site and Facility*, dated July 15, 2009 at 4.

5. **Historic Sites**. The project will have a visual impact on certain historic sites in the region. There is as yet insufficient information to determine whether that impact will be adverse. The Applicant has therefore not yet met its burden of proof on this issue.

The Applicant has defined the area of potential effect (“APE”) as that area within three miles of the project from which the turbines will be visible. *See* Applicant’s Exhibit 71 at 3. Within the APE are the Hebron Village Green / Hebron Village Historic District (National Register listed, 1985), and the historic core of the town of Rumney, as well as many historic homes and farmhouses. The New Hampshire Division of Historic Resources (NHDHR) has requested that the Applicant conduct an intensive survey of the following properties and districts to determine (i) whether they are eligible for listing on the National Register of Historic Places and (ii) whether the Project will have an adverse effect on the Register-eligible sites:

- 1) Rumney Village
- 2) Rumney Depot
- 3) Quincy Road from Stinson Brook to
- 4) Elm Mere Farm, Hebron
- 5) 431 Georges Road, Hebron
- 6) Galante House, Rte 3A, Hebron
- 7) Pikes Tavern, Rte 3A, Hebron
- 8) 521 Mayhew Turnpike, Plymouth
- 9) 12 Smith Bridge Road, Plymouth
- 10) Circle House, Rte 3A and 25, Plymouth
- 11) Adams-Cummings House 27 Route 25, Plymouth
- 12) 618 Fairgrounds Road, Plymouth

See Applicant’s Exhibit 56.

These sites, and the other sites within the APE that have previously been determined to be National Register eligible, will be reviewed for indirect adverse affect: whether the

introduction of an incompatible visual element will adversely alter the setting of a historic site, where the site's setting is a central feature of the site's Historic Register eligibility. Pre-filed Testimony of Hope Luhman, March 2010.

At the conclusion of the first set of hearings, on November 5, 2010, the Committee did not have sufficient evidence and testimony to make a finding as required by RSA 162-H:16, IV with respect to historic sites. *See* Order of the Committee, December 14, 2010 (NHDHR's rejection of the Applicant's Project Area Form "affect[ed] the statutory concerns of the Subcommittee," requiring the submittal of additional information.); *see also* Transcript, Day 5 at 101, 116-117 (comments from Chairman Getz); and Transcript, Day 6 at 36 (Chairman Getz: I would be hoping to see something from DHR... or something among DHR, the Applicant and the Army Corps that resolves the large uncertainty that's sitting out there right now.") As directed, the Applicant submitted additional testimony from Dr. Luhman and additional evidence regarding the historic sites in the region. This testimony and evidence was not sufficient for the Applicant to meet its burden on this issue.

At the March 22, 2011 hearing, the Applicant's witness, Dr. Luhman, did not testify that the visual impact on the nearby historic resources would be so insignificant as to have no adverse effect. Instead, Dr. Luhman testified that there may be an adverse effect, but that she was not in the position to make that judgment. Testimony of Dr. Luhman, 3/22/11 at 33-35. The U.S. Army Corps of Engineers (ACOE) in consultation with the NHDHR will make the decision on whether there will be an adverse effect. *Id.* at 62.

According to Dr. Luhman, any adverse effect would be unreasonable, unless the effect is mitigated. Id. at 24. Mitigation of adverse effect of a project on a historical resource is not strictly required by federal law. Id. at 67. However, the Applicant expects that if there is a determination of adverse effect, then it will be required by the ACOE to compensate that effect through some kind of mitigation. Id. at 64. At the same time, no certificate can be granted if the project has an unreasonable adverse impact on historic sites. RSA 162-H:16, IV (c). Fortunately, the Committee can condition the issuance of a certificate upon “such reasonable terms and conditions as the committee deems necessary” and upon the results of subsequently completed agency reviews. RSA 162-H:16, VI and VII. RSA 162-H:16 does not appear to allow the Committee to delegate its responsibility to make findings to any other body.

Because there is a possibility that the project would have an unreasonable adverse effect on historic sites *and* there is a possibility that no mitigation, or inadequate mitigation, will be required by the ACOE to compensate for those adverse effects, the Certificate should be conditioned to mandate adequate and appropriate mitigation. Specifically, Counsel for the Public proposes that any proposal for mitigation for adverse effects on the region’s historical resources that the Applicant makes be subject to formal review and approval by the Committee. If the Committee deems the mitigation insufficient, it should retain jurisdiction to order additional mitigation, as it deems necessary and appropriate to compensate for the impacts on the historic resources of the area.

6. Noise. It appears from the evidence that the project is not predicted to create noise emissions at the closest receptors in excess of 41 dB. Transcript Day 2 – PM at 72. For the reasons explained by Mr. Tocci, the Committee should establish a noise criteria for the project that is not only absolute, but instead is also relative to the background levels at a given location, as such were computed by Mr. Tocci. This method has the virtue of protecting the community from what will annoy residents the most and provide the project protection from absolute defaults regardless of circumstances that may differ at a particular location.

“Wind turbine noise has a unique and visceral sound character which may be perceived as being twice as loud as measured.” Ambrose & Rand, “Wind Turbine Noise: An independent assessment, noise complaints predictable,” October 2010, PC-15. People can become habituated to routine environmental noise such as traffic and still find wind turbine noise annoying. Transcript Day 3 –PM at 104-105 (Tocci); Transcript Day 2 – PM at 74, 76 (O’Neal). Different locations have different levels of background noise created by different kinds of sources. Thus, while 45 dB may not create any annoyance alongside a highway near a restaurant, to someone in the hills accustomed to hearing little more than natural forest sounds, an additional noise level of 5 dB can produce annoyance and complaint even if at or below 45 dB. While Mr. Tocci’s method tends to focus on the quietest times, it is during these times that annoyance is likely to be most felt. In a condition that is designed to protect the public, a focus on the sensitivity of the community and residents, and not the convenience of the operator is appropriate.

In his testimony, Mr. Tocci recommended the application of two simple criteria. PC-2, at 12. His analysis showed that impacts be determined on a scale compared against the baselines and an absolute limit that he determined as follows:

1. Amount that computed Groton Wind Farm sound exceeds the CTA determined baseline sound level:

- 5 dBA – No impact
- 10 dBA – Minor Impact
- >10 dBA – Significant Impact

2. Computed Groton Wind Farm sound should not exceed 40 dBA at residential uses.

Under his measurements at the various locations, only minor impacts were predicted at Halls Brook, Tenney Mountain and Baker River Campground. *See* Addendum Dated November 19, 2010 to Supplemental Prefiled Testimony of Gregory Tocci at 15. Counsel for the Public does not recommend any particular mitigation be ordered at this time for these predicted minor impacts and does not assert that the expectation of these impacts constitutes an unreasonable adverse impact requiring denial of a certificate. Counsel for the Public does request, however, that Tocci's methodology be adopted as a condition for the limitation on actual noise impacts that may be experienced once the project becomes operational. Thus, should a receptor actually experience either sound above the Tocci baseline of more than 5 dBA or actual windfarm sound over 40 dBA, the certificate holder would be required to take steps to address and mitigate the sound complaint to achieve compliance with no impact and sound level no higher than 40 dBA at the façade of the home. A complaint response approach similar to what was imposed in Lempster would be appropriate. *See* Lempster

Decision at 47-49. The Applicant, as in Lempster, should be required to conduct post-operational sound studies and provide the reports thereof to the Committee and the parties.

7. Other Conditions. Counsel for the Public offers the following additional conditions on other issues:

a. The Committee should adopt the request of the Town of Plymouth for fire fighting apparatus. Counsel for the Public supports this request.

b. The Committee should require the Applicant to maintain a vegetative screen around the Holderness stepup facility.

c. The Committee should require that the facility (including the step up facility in Holderness) be constructed and operated in conformity to fire, life safety and electrical codes.

d. The Committee should require that the Applicant return to the Committee should the feasibility study or any other cause require the Applicant to modify the facility (including the step up facility) from the design presented to the Committee and the parties in the hearings. To the extent that the applicant believes such modifications are immaterial, it should be required to provide a report and analysis demonstrating the immateriality to the Committee and the parties.

e. The Committee should require the applicant to abide by the construction hours limitations from the Groton agreement in the construction of the Holderness stepup facility as discussed on the record.

f. The Committee should require the Applicant to avoid any of the natural features identified by VRB in its report concerning the alternate route for the interconnection down to Rt. 25.

g. The Committee should require that if construction of the facility is not completed by July 31, 2013, the applicant shall file a notice with the Committee and show cause as to why the decommissioning provisions of the Order and Certificate of Site and facility should not be imposed.

Wherefore, Counsel for the Public prays that the Committee not approve the application or grant a certificate without the conditions set forth above.

Respectfully submitted,

COUNSEL FOR THE PUBLIC
BY
MICHAEL A. DELANEY
ATTORNEY GENERAL

By /s/ Peter C.L. Roth
Peter C.L. Roth
Senior Assistant Attorney General
33 Capitol Street
Concord, New Hampshire 03301

CERTIFICATE OF SERVICE

I, Peter C.L. Roth, do hereby certify that I served the foregoing upon the parties by email.

April 1, 2011

/s/ Peter C.L. Roth
Peter C.L. Roth