

Chairman Robert Scott
New Hampshire Site Evaluation Committee
21 South Fruit Street, Suite 10
Concord, NH 03301

Re: NH Site Evaluation Committee Antrim Wind, Docket No. 2015-02

Dear Chairman Scott and Sub-Committee Members:

My name is Russell Blair and I have a home in Bridgewater, NH. For the last few years, I have participated in the SB99 process and as part of the SB99 Pre-Rulemaking sub-committee discussion regarding appropriate noise, shadow-flicker and ice throw criteria for Wind Energy. I want to thank you for the opportunity to speak with you as you contemplate the Antrim Wind application.

All of my comments pertain to sound and the Applicants adherence to the new SEC criteria, specifically:

1. The updated “Sound Level Assessment Report”, Attachment 9 does not include the property lines of abutters and no estimated sound levels at the abutter’s property lines. As you know, the new language agreed to during the Rulemaking includes 301.14(f) (2) which states that sound shall be measured “on property that is used in whole or in part for permanent or temporary residential purposes, at a location between the nearest building on the property used for such purposes and the closest wind turbine. During the rulemaking deliberations Mr. Weisner commented “*and, that language I came up with, it intended to both make it clear that we’re not just, you know, seasonal housing is included, which was a concern of a number of commenters, and also to capture the concept that “wherever people are trying to sleep, we’re going to measure the sound”. So, that’s “permanent or temporary residential purposes”. It could cover an inn, perhaps a campground even. So, that was the purpose for including that more expansive language.*” (Emphasis added from page 111 from 8/27/2015 transcript). The Applicant has failed to provide the property lines of abutters that would permit the Committee to make an informed decision. “Seasonal housing” would include a tent. The intent of this language was to allow abutters to a Wind project, the complete and full use of their property free of adverse noise impacts.
2. In the “SUPPLEMENTAL PREFILED DIRECT TESTIMONY OF ROBERT D. O’NEAL ON BEHALF OF ANTRIM WIND ENERGY, LLC page 3, line 15 Mr. O’Neal rebuts testimony of Richard James and Lisa Linowes with respect to applying a +/- 3 dBA adjustment to the estimated sounds levels specified in ISO 9613-2. Mr. O’Neal testifies “*The ISO 9613-2 standard states, for receivers at a distance between 100 meters (328 feet) and 1,000 meters (3,280 feet) from a source AND ranging from 0 to 30 meters (98 feet) high, the model results are estimated to be accurate to +/- 3 dBA. Hub heights of the wind turbines range from 79.5 m (261 feet) to 92.5 m (303 feet) which is well above the 98 foot limit in the accuracy clause. Therefore, this accuracy clause is not applicable. There is no +/- 3 dBA “correction.” The Sound Report correctly followed the ISO 9613-2 standard.*” (emphasis added) However in the Applicant’s Sound Level Assessment report, the Applicant asserts that Wind Turbine sound originates from two sources, mechanical and aerodynamic noise. Mechanical noise originates from the hub while aerodynamic noise originates from “the wind turbine blades with localized airflow inhomogeneities and wakes from other turbine blades and from airflow across the surface of the blades, particularly the front and trailing edges. Aerodynamic sound generally increases with increasing wind speed”. Therefore the entire blade should be considered as a noise generator and in particular the blade tips will

generate most of the sound since the tip of the blades are traveling at the fastest apparent wind speed. The Applicant erred in assuming that the hub of the turbine generated the sound and did not consider that the blade tips also generate aerodynamic sound. Therefore the sound source for turbines with a hub height of 79.5m minus the length of the blade (56.5 meters) = 23 meters this is well within the 30 meter range to requiring the +/- 3 dBA adjustment to the modeled sound levels as required by ISO 9613-2. Thus the +/-3 dBA adjustment applies.

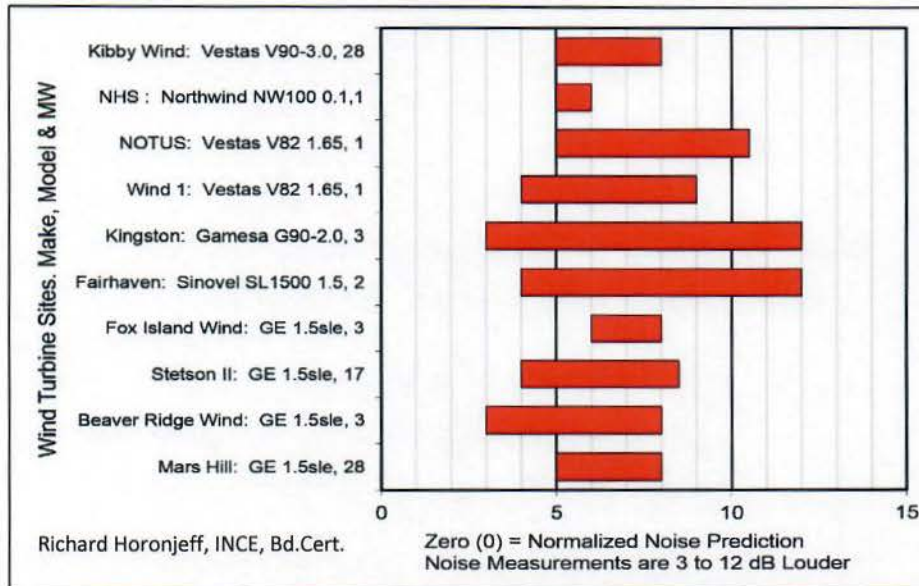
3. The Applicant and its consultant want you to believe that their sound projections are accurate and conservative in nature. They cite projects in Maine where the post construction sound measurements are less than projected so you should believe them. However there are other projects such as Sheffield Wind in Vermont, Hoosic Wind and Falmouth Wind in MA where people were forced out of their homes or continue to suffer from sleep disturbances due to turbine noise. Please consider the attached report by S.E. Ambrose & Associates where wind turbine noise measurements have exceeded model predictions by 3 to 12 dB. Thus having a conservative approach to sound generated by wind turbines is truly in the public interest.

Thank you for your time.

Respectfully submitted,

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Wind turbine noise measurements have exceeded model predictions by 3 to 12 dB.



RSG's 2008 warning for under-predicting wind turbine noise is confirmed (G=1).

