

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

Docket No. 2021-02

Investigation of Complaints Regarding Antrim Wind LLC Operations

**BARBARA BERWICK, JANICE LONGGOOD, LORI LERNER, LISA LINOWES, AND DR.
FRED WARD'S MOTION FOR REHEARING DECEMBER 11, 2023 DECISION RELATING
TO FINAL DISPOSITION OF REMAINING COMPLAINTS**

NOW COME Barbara Berwick, Lori Lerner, Lisa Linowes, Janice Longgood, and Dr. Fred Ward (“Parties”), and hereby move the Site Evaluation Committee (hereinafter “NHSEC” or “Committee”) to grant a rehearing with regard to its December 11, 2023, decision to accept the final disposition of remaining complaints relating to the Antrim Wind Energy facility (“Facility”). In support thereof the Parties state as follows:

I. INTRODUCTION

The purpose of this Motion is to request that the NHSEC grant rehearing of its December 11, 2023 decision (“Decision”), through which the NHSEC accepted the Administrator Report (“Admin Report”) posted October 11, 2023 under Docket 2021-02.¹ The Admin Report details the investigative subcommittee’s (“Subcommittee”) recommendations regarding additional operational complaints against the Facility received but filed after December 31, 2021. The specific complaints disposed of through the NHSEC’s Decision that are the subject of this motion are the May 1, 2023 noise complaint filed by Ms. Janice Longgood, and the complaints filed by Richard Block regarding the inadequacy of the Aviation Detection and Lighting System (“ADLS”) in controlling nighttime lighting.

II. FACTUAL AND PROCEDURAL BACKGROUND

On March 17, 2017, the NHSEC issued conditional approval of Antrim Wind Energy’s (“AWE”) Application to construct and operate a nine-turbine, 28.8 megawatt wind energy facility in the Town of Antrim, New Hampshire. This approval was subject to motions for rehearing by intervenors to the proceeding including Counsel for the Public, the Meteorological Group, Abutting and Non-abutting Landowner Groups, the Levesque-Allen Group, the Stoddard Conservation Commission, and the Windaction Group.

The Facility commenced operation on December 24, 2019. Noise and nighttime lighting complaints were subsequently filed with the NHSEC through 2020, 2021, 2022, and 2023 by neighboring property owners. Other complaints were filed with the NHSEC concerning the methodologies applied by Acentech when conducting post-construction seasonal noise compliance surveys at the Facility and Cavanaugh Tocci when conducting complainant validation at the Facility.

On April 2, 2021, the NHSEC issued an order constituting the Subcommittee and charging it with reviewing and investigating complaints filed through December 31, 2021 and making recommendations on the dispositions of the complaints.

¹ The Administrator’s report does not contain a date of issue.

On August 23, 2021, the Subcommittee issued a recommendation to the NHSEC² wherein it provided the Subcommittee's interpretation of the NHSEC rules relating to the time period for measuring LAeq. Finding 48. The Subcommittee's August 23, 2021 recommendation also articulated specific requirements directly from the ANSI Standard for conducting field sound surveys (i.e. isolation of the noise source under test by removing background noise and removal of transient noises that would otherwise contaminate the data collected.) Finding 39 (ANSI Standard at vii) and Finding 40. In its recommendation, the Subcommittee acknowledges "the need for field surveys to take place under the same meteorological conditions as were present at the time of the Complaint. See Site 301.18(i)." Finding 86.

On March 9, 2022, the NHSEC deliberated on, and ultimately adopted the Subcommittee's recommendations.

In the period following the March 9, 2022 meeting, HMMH was contracted to conduct a noise complaint validation study pursuant to NH Site 301.18(i).³ NH Site 301.18(i) requires that "Validation of noise complaints submitted to the committee shall require field sound surveys, except as determined by the administrator to be unwarranted, which field studies shall be conducted under the same meteorological conditions as occurred at the time of the alleged exceedance that is the subject of the complaint."

On or around March 30, 2022, HMMH submitted Task Order 1 to Jonathan Evans wherein HMMH details the method for conducting long-term unattended sound measurements. HMMH did not follow the monitoring plan as outlined in Task Order 1, but instead opted to conduct short-term, attended monitoring with meters situated on land with public access. HMMH submitted the Antrim Wind Compliance Monitoring Report ("HMMH Report") to the NHSEC on April 6, 2023 stating that during the periods of measurement and at the locations where measurements were made, the Facility was found to be operating in compliance with the NHSEC noise limits.

On May 23, 2023, the Subcommittee convened a public meeting to receive comments on the HMMH Report during which the Subcommittee voted to recommend the NHSEC accept findings without amendment. On June 7, 2023 the NHSEC accepted the Subcommittee's Recommendation. At that same meeting, the NHSEC ordered the Subcommittee to examine all other complaints filed against the Facility that were received after December 31, 2021. The NHSEC Administrator issued the Admin Report detailing the Subcommittee's final recommendations concerning Antrim Wind complaints. The NHSEC accepted these recommendations at its December 11, 2023 meeting.

III. REQUEST FOR REHEARING

A person affected by an NHSEC order or decision may request rehearing within 30 days of the date of the order. N.H. Admin. R., Site 202.29. The NHSEC shall grant a motion for rehearing if it determines that the NHSEC made an error of fact, an error of reasoning, or an error of law and that the NHSEC's resulting order was unlawful, unjust, and unreasonable.

The NHSEC issued decisions on December 11, 2023. Accordingly, this Motion for Rehearing is timely pursuant to N.H. Admin. R., Site 202.29. The Parties respectfully request rehearing regarding the December 11, 2023 decisions to correct two primary errors of fact, reasoning or law. First, the NHSEC

² Subcommittee's Recommendation to the Site Evaluation Committee Concerning Charge 1 August 23, 2021.

³ The contract between the NHSEC and HMMH was executed on March 30, 2022 for an amount not to exceed \$100,000. See Subcommittee Quarterly Report August 31, 2022.

acted unlawfully and unreasonably when it agreed to dismiss Ms. Longgood's May 1, 2023 noise complaint for lack of details and based on the findings of the HMMH field survey. Second, the NHSEC acted unlawfully and unreasonably in accepting that 20-30% on-average nighttime illumination satisfies the requirement under RSA 162H:16(c) that the Facility will not produce an unreasonable adverse effect on aesthetics despite a failure by the Committee to conduct a visual analysis of nighttime lighting during under Docket 2015-02.

1. NHSEC Erred by Disposing of the Longgood Noise Complaint Without Further Investigation

The Admin Report at paragraph 19 states that the Subcommittee based its recommended of no further action on Janice Longgood's noise complaint on two factors:

- a) Ms. Longgood's complaint lacked "specifics on dates and times for supposed violations post-dating the HMMH study and provides no data or other basis to determine a violation."
- b) An assertion by HMMH representative, Christopher Menge, that the Subcommittee believed provided sufficient proof to conclude that turbine noise at Ms. Longgood's home could not exceed the NHSEC sound limit.

On the issue of the complaint lacking specifics, neither the NHSEC nor its Subcommittee has established a formal method of reporting Facility complaints. The public has not been informed as to how to file complaints nor have there been any specifics provided regarding what information is needed for a complaint to be validated. Nonetheless, if the Subcommittee believed additional information was needed to further investigate Ms. Longgood's complaint, neither the NHSEC Administrator nor the Subcommittee tried to reach Ms. Longgood to get the necessary details to ensure her complaint received the attention it deserved. Instead, the record shows the complaint was simply ignored and dismissed.

On the second matter, the NHSEC accepted without any evidence that measurements taken during the HMMH field survey were sufficient to prove that turbine noise levels at Ms. Longgood's home comply with NHSEC sound limits.

Ms. Longgood (156 Salmon Brook Road) is an immediate abutter to the Antrim Wind facility at just 3600 feet from turbine #5 and within the line of sight of multiple other turbines. Ms. Longgood's complaint states that she is experiencing high turbine noise levels at her home.

NH Site 301.14(f)(2)(a) requires that the Facility not exceed sound levels of 45 dBA daytime and 40 dBA nighttime when 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."

The phrase "between the nearest building...and the closest wind turbine" is specific and was deliberately selected. The NHSEC could have written the rule to require compliance measurements be taken at the residential building, at the property line of the Facility, or some other general area within a specified distance of the turbines regardless of land use but this was not done. No sound measurements were conducted on Ms. Longgood's residential property at any location between her home and the closest turbine. The nearest location to Ms. Longgood's home where noise complaint monitoring occurred was more than ¼ mile further west of Ms. Longgood's home and away from the turbines.

There is no record under Docket 2021-02 that confirms that the NHSEC or its Subcommittee voted to waive the language of NH Site 301.14(f)(2)(a) regarding measurement locations.

The Admin Report at 19 cites testimony by Christopher Menge of HMMH that ‘the study’s findings are valid even though conducted from state property, because the wind turbines are a “line source” of sound, “sound levels drop off fairly slowly with distance from a source like that.” He also testified “given the distances that we measured, and the distance the homes were, I think the difference in sound level would be very small, certainly less than a decibel.’” The Admin Report concludes that the “HMMH study thus does not support violations occurring at Ms. Longgood’s residence.”

Mr. Menge’s general reference to “line sources” and off-the-cuff assertion that line sources do not decrease rapidly over distance are gross simplifications of noise propagation in a complex environment. Mr. Menge has no data to support his claim as it relates to the Antrim facility nor is this statement included in the HMMH Report. Unless, or until he conducts his own sound propagation analysis at the Facility, Mr. Menge’s testimony on this issue is gratuitous and should carry no weight.

Still, if we were to stipulate that Mr. Menge is correct regarding the small difference (less the 1 dB) in sound level between where HMMH measured noise and Ms. Longgood’s home at ¼ mile closer to the turbines, then the HMMH survey strongly suggests the Facility is exceeding allowed levels. HMMH measured nighttime turbine noise levels of 39.2 decibels (leq 5 min) a ¼ mile further from the turbines than Ms. Longgood’s residence. Using Mr. Menge’s metric of less than 1 dB, an exceedance would occur on Ms. Longgood’s property.

But more importantly, the detailed sound propagation model prepared by Antrim Wind and filed with the application under Docket 2015-02⁴ shows that the Facility’s sound emissions would be as much as 3 dB louder at Ms. Longgood than at the location where HMMH measured. Applying Antrim Wind’s propagation model, which the Subcommittee should have done, would show nighttime noise levels at Ms. Longgood’s home of at least 42.2 db.

The Antrim Wind record on noise propagation in Docket 2015-02 was tested under a full adjudicative proceeding. Mr. Menge’s general, and qualified assertion (“*I think the difference in sound would be very small*”) regarding rates turbine sound decay was not. Both claims cannot be accepted as true. The Antrim sound study is the correct source for assessing propagation rates unless a separate study is conducted which challenges it.

The Admin Report at paragraph 19 points to Cavanaugh Tocci sound survey conducted in 2020 at locations on Reed Carr Road to validate HMMH’s survey and further bolster the position that Facility noise at Ms. Longgood’s property will not exceed allowed limits. However, the methodology followed by Tocci bears no resemblance to that followed by HMMH, nor does it follow the Subcommittee’s adopted interpretation of the SEC noise rule.

The Cavanaugh Tocci report openly states that all turbine noise data collected had to be discarded as contaminated by other noises in the environment (See reference to ‘void’ in Appendix A Tables of the report). In other words, Tocci was unable to isolate ‘turbine-only’ noise as required when conducting sound surveys. Beyond that, the methodology was not grounded in the ANSI Standard nor the NHSEC rules, and Tocci’s conclusion that “the AWE wind turbine sound *likely* conforms” [emphasis added] to the SEC limits was nothing more than an opinion that was not supported by sound data.

In applying the HMMH survey findings to the Longgood complaint based on a general claim regarding turbine noise propagation, the Subcommittee has determined that any further noise complaints are likely

⁴ Antrim Wind Energy Project Sound Level Assessment Report, February 17, 2016.

to fall squarely within the parameters of the HMMH survey, thus eliminating any conditions where further noise complaints will be investigated. Doing so effectively negates NH Site 301.18(i).

2. NHSEC Erred by Accepting Nighttime Lighting Impacts That Exceed Levels Approved Under the Certificate Issued in Docket 2015-02

The Subcommittee has concluded that Antrim Wind is compliant with its certificate regarding the ADLS based on the following:

- a) The Antrim Wind certificate only requires ADLS to be installed with no performance standard for how long lights can be on.
- b) A 20-30% on-average nighttime illumination period is compliance with the certificate.

Taking the latter claim first, there is insufficient data available from Antrim Wind to show that the 20-30% on-average "lit" condition is reliable. Antrim Wind has provided only 2 months of data since the presumed final repair was completed in June 2023. Given the extended timeframes when the ADLS was inoperable, it is not possible to assess performance across similar periods from one year to the next. Consequently, there is no basis for concluding the ADLS will deliver consistent performance month-to-month or year-to-year.

There is also no evidence in the record that confirms Antrim Wind took all actions necessary to ensure the ADLS is operating as efficiently as possible. Documents submitted by Antrim Wind on May 17, 2021, June 17, 2021, and January 31, 2022 show that a flight test was slated to be flown during a period of full-foliage cover to test the ADLS functionality but there is no record this flight test happened.⁵

Antrim Wind admits in documents provided the Subcommittee that "[d]ue to the geographic relief and tree canopy around the Antrim Wind facility," "a land "mask" is required to prevent the ADLS system from activating turbine lights due to detections of the tree canopy," The land "mask," according to Antrim Wind, may need to be updated annually to reduce the frequency of light activations at facility.⁶ There is no information in the record that this step was implemented.

While these are concerning deficiencies, the larger question of compliance is tied to the intent of the NHSEC when it issued the certificate and the requirements imposed on the NHSEC by RSA 162H.

The NHSEC found in 2017 that by installing the ADLS prior to the Antrim facility being placed in service, it would ensure the facility does not create an unreasonable adverse effect on aesthetics.

This decision was taken after the SEC accepted the sworn testimony by Antrim Wind that "the system will only activate the nighttime FAA obstruction lights in the event that there is an aircraft flying at low altitude at night in close proximity to the Project, which will almost eliminate this nighttime light

⁵ Attachment J, Antrim Responses to the NHSEC Subcommittee information requests of December 6, 2021 at 5, January 31, 2022. https://www.nhsec.nh.gov/projects/2021-02/documents/2022-01_attachments_i-q.pdf

⁶ *Id* at 6

source.”⁷ On this basis, the SEC did not require Antrim Wind to provide detailed information about nighttime lighting including visual simulations of nighttime conditions (NH Site 301.05(b)(9)).

At the December 11, 2023 meeting Antrim Wind attorney Needleman argued the following:

In fact, at the time the Certificate was issued, any party to the proceeding could have said to the SEC "You didn't get it right. This Certificate is wrong. It doesn't reflect things that should have been in it." It's called a "Motion for Rehearing", and the statute requires that it's filed within 30 days of the time that the certificate is issued. Nobody filed that motion for rehearing. Nobody said "This is wrong", nobody said "These conditions should be different." That was the end. The Certificate was made final. And, now, here we are, years later, and, essentially, now people are making that motion for rehearing.

Mr. Needleman grossly misled the NHSEC with his statement.

The majority of intervenors in Docket 2015-02 *did* file timely motions for rehearing where they strenuously argued there was insufficient evidence in the record for the NHSEC to make an informed decision regarding the impact of lighting on aesthetics. The motions filed were by the Meteorological Intervenors (3/25/17), Counsel for the Public (4/17/17), and a joint motion by the Abutting Landowners Group, non-Abutting Landowners Group, the Levesque-Allen Group, the Stoddard Conservation Commission, and the Windaction Group (4/14/17).

The following text from the jointly filed motion of the Abutting Landowners et.al.⁸ clearly articulates the questions now raised before the NHSEC:

With regard to the use of radar detection lighting systems, the Subcommittee found that the "[i]nstallation of such systems will effectively minimize the nighttime impact of the Project while ensuring its operation." See Antrim II Decision at 118. However, there is no evidence in the record as to what visual impact this system will have. With the exception of the Applicant, no party has seen the FAA permit. The Subcommittee has not seen the FAA's permit. There is no evidence in the record as to the frequency with which this system will be activated. There is no evidence as to what size object will trigger the lights to activate, or the distance at which a flying object will activate it. There is no evidence as to what impact the Manchester Airport, and flight patterns coming from it, will have on the radar detection lighting system. In short, there is no evidence from which to draw any conclusions from the Applicant's agreement to employ a radar detection lighting system. As such, Mr. Raphael's consideration of this measure as a mitigation system is without any foundation, and the Subcommittee's finding in this regard is unlawful, unreasonable, and unsupported by any evidence.

⁷ Bird and Bat Conservation Strategy for the Antrim Wind Energy Project at 47, July 9, 2016. <https://www.nhsec.nh.gov/projects/2015-02/application/documents/10-02-15-sec-2015-02-appendix-12f-bbcs-07-9-15.pdf>

⁸ https://www.nhsec.nh.gov/projects/2015-02/motions-waivers/2015-02_2017-04-14_mtn_rehear_intervenors.pdf at 28

Mr. Needleman now argues there were no performance expectations established. However, in his objection to the jointly filed motion for rehearing he promotes language⁹ from the Antrim Wind visual assessment that others providing testimony on December 11, 2023 also offered.

The VA contains details regarding which turbines will be lit, the type of light that will be used, and reaches a conclusion based on professional judgement that the use of a radar activated system will essentially eliminate the impact. *LandWorks Visual Simulation, at p.37.*

The NHSEC's expectation of the ADLS performance was derived directly from Antrim Wind's statements and memorialized in the below exchange between Presiding Officer Robert Scott and John Clifford of the PUC legal division during the May 5, 2017 hearing on Motions for Rehearing:

When asked by presiding officer Scott if the committee may have erred in its consideration of nighttime lighting, Mr. Clifford responded "I don't think we erred in that area because we -- again, we addressed that through the radar lighting system ... And it seems to me that that new technology avoids the issue of having them [the lights] on from, you know, sunset to sunrise. So, to that extent, I believe that we covered they were only going to light up ... when jet aircraft approached, and for a limited period of time. So I think we discussed that, and so I see nothing new here."¹⁰

The Committee members also understood that installing the ADLS *prior* to the Facility being placed in service was necessary or else their review of the application relative to nighttime lighting would be incomplete.¹¹

RSA 162H:16 requires that "After due consideration of all relevant information regarding the potential siting... the committee shall find (among other things) that: (c) The site and facility will not have an unreasonable adverse effect on aesthetics."

In Docket 2015-02, Antrim Wind did not provide the information necessary for the SEC to conduct a thorough review of the impacts of nighttime lighting. There were no witness testimonies, no exhibits

⁹ https://www.nhsec.nh.gov/projects/2015-02/motions-waivers/2015-02_2017-04-24_obj_mtn_rehear.pdf at 24.

¹⁰ Transcript at 91. May 5, 2017. https://www.nhsec.nh.gov/projects/2015-02/transcripts/2015-02_2017-05-05_transcript_rehearing.pdf

¹¹ Transcript at 57. December 7, 2016. https://www.nhsec.nh.gov/projects/2015-02/transcripts/2015-02_2016-12-07_transcript_delib_day1_pm.pdf

CMNR. ROSE: ...I think it's reasonable for us to assume that that [the ADLS] would be something that would be in place prior to its operation.

MR. CLIFFORD: I thought that was one of the key assumptions we were making and that's why we didn't see nighttime visual simulations.

PRESIDING OFFICER SCOTT: And I think I agree with Commissioner Rose. I'd be a little bit uncomfortable with the level of analysis that's been done, assuming it doesn't happen. That, to me, is something that wasn't fully vetted. ...without that condition, I feel we're a bit on unstable ground I think.

related to nighttime lighting, and no cross-examinations or informed deliberations that investigated the level of lighting that could result in an unreasonable adverse effect.

Further, Attorney Turner's claim at the December 11, 2023 meeting that the "Subcommittee was not tasked with trying to decide whether the facility is operating as efficiently as it can or the ADLS system is operating perfectly. It was only tasked with trying to recommend to you whether the facility is complying with the terms of its Certificate" exemplifies the inadequacy of the Subcommittee's review of this important matter. December 11, 2023 Tr at 80

By accepting the Subcommittee's recommendation that 20 to 30% "on average" nightly illumination is an acceptable threshold, the NHSEC has established a very high level of permitted nighttime lighting without making a determination of "unreasonable adverse effect." Further, it shifts the onus to the public to track the hours of nighttime lighting to see if the 20 to 30% limit is exceeded before filing a complaint. In effect, this decision absolves Antrim Wind of any obligation to meet a lighting standard. This action by the Committee was unilateral, arbitrary, an abuse of discretion and contrary to RSA 162H.

The correct process would have required opening an adjudicative proceeding on this issue and investigating the lighting question to determine an evidence-based threshold for lighting. Specific to Antrim Wind, the NHSEC should also have require Antrim Wind to proceed with its flight test and land "mask" mitigations and to continue to report performance levels.

IV. CONCLUSION

For the reasons stated above, the Parties respectfully ask that the NHSEC grant rehearing with respect to its decisions to dismiss the Longgood noise complaint and to accept the current nighttime lighting conditions at the Facility.

Dated this 10 day of January, 2024

/s/ Barbara Berwick

/s/ Janice Longgood

/s/ Dr. Fred Ward

/s/ Lori Lerner

/s/ Lisa Linowes

Certificate of Service

I hereby certify that I served a copy of this Motion for Rehearing pursuant to Site 202.07 to the current service list in this Docket this 10th day of January, 2024.



Lisa Linowes

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