

STATE OF NEW HAMPSHIRE
SITE EVALUATION COMMITTEE
INVESTIGATORY SUBCOMMITTEE

Docket No. 2021-02

INVESTIGATION OF COMPLAINTS
REGARDING ANTRIM WIND ENERGY FACILITY

**SUBCOMMITTEE'S FINAL RECOMMENDATION TO THE SITE EVALUATION
COMMITTEE CONCERNING ANTRIM WIND COMPLAINTS**

The Investigatory Subcommittee (the "Subcommittee") makes the following final recommendation to the full Site Evaluation Committee (the "Committee"), as required by Charge 3 of the April 2, 2021 Order Appointing the Subcommittee:

The Subcommittee's Charge and Work thus Far

1. On April 2, 2021, Chairwoman Martin issued an order constituting this Subcommittee and charging it with three tasks:
 - Charge 1: Review the law, administrative rules, the Facility's Certificate, and all other relevant filings related to noise limits and sound measurement methodology. Forward a written recommendation regarding the appropriate methodologies for measurement and analysis of sound, and procedure for validating noise complaints to the full Committee by April 23, 2021.
 - Charge 2: Review and investigate complaints filed through December 31, 2021, regarding Facility operations to ensure the terms and conditions of the Certificate are being met.
 - Charge 3: Make recommendations to the full Committee regarding the disposition of such complaints.
2. After all members were named, the Subcommittee held its first public meeting on April 20, 2021 and adopted an Investigative Plan.
3. On May 20, 2021 Chairwoman Martin issued an Order Regarding Subcommittee Charge, granting the Subcommittee additional time to complete Charge 1 and instructing the

Subcommittee that its charge “is focused on the current requirements pursuant to New Hampshire law, the administrative rules of the Subcommittee, and the existing requirements of the Certificate and Decision related to this facility.”

4. The Subcommittee revised its Investigative Plan and adopted it at a May 21, 2021 public meeting. At that meeting, it also discussed a May 6, 2021 Complaint filed by Rep. Vose regarding the Certificate Holder, Antrim Wind Energy, LLC’s (“Antrim Wind”) aircraft detection lighting system. The Subcommittee decided to recommend to the full Committee that it (1) find no violation of Antrim Wind’s Certificate with regard to the Vose complaint, and (2) undertake no enforcement action on the complaint. That recommendation was forwarded to Chairwoman Martin on May 24, 2021. The full Committee later adopted the Subcommittee’s recommendation concerning the Vose complaint.

5. Pursuant to its Investigative Plan, the Subcommittee held a public meeting on June 17, 2021, to solicit comments from the public concerning Charge 1. It also invited written submissions, which were received from a variety of parties.

6. On August 23, 2021, the Subcommittee transmitted its recommendation concerning Charge 1 to the Committee.

7. The Committee adopted the Subcommittee’s recommendation on March 9, 2022.

8. The Subcommittee hired an independent sound expert, Harris Miller Miller & Harrison, Inc. (“HMMH”) to conduct a field sound survey to validate the noise complaints received through calendar year 2021.

9. HMMH found that “no LAeq values measured during any of the full one-hour monitoring periods or the 5-minute monitoring periods equal or exceed the 40 dBA LAeq

nighttime limit or the 45 dBA LAeq daytime limit. Therefore, the monitoring showed consistent compliance with this absolute noise level standard.”

10. Based on the sound study and other information reviewed by the Subcommittee, it recommended on May 31, 2023 that the full Committee take no enforcement action with regard to fifteen complaints that it recognized beyond the Vose complaint.

11. On June 23, 2023, the Committee adopted the Subcommittee’s recommendation and issued an order expanding the Subcommittee’s charge to review all operational complaints for the Antrim Wind facility to June 2023. Specifically, the Subcommittee was ordered to

- “review all operational complaints received by the Site Evaluation Committee associated with the Antrim Wind facility for which a specific disposition recommendation has not been provided to the full Committee.” The operational complaints to review include all complaints **between December 24, 2019 through June 7, 2023.**
- Investigate each complaint to the extent the Subcommittee deems sufficient to make an informed and sound disposition recommendation. All investigative work shall be conducted expeditiously.
- Report to the full Site Evaluation Committee its specific recommendation for each complaint as soon as it able to make a recommendation concerning the complaint.
- By September 1, 2023 provide an accounting of all complaints received by the Committee and the status of each complaint. This status report shall include the date the complaint was received and whether the complaint is still under investigation.

Accounting of Complaints

12. Complaints are not cataloged separately from other communications to the Committee. Also, the Committee’s rules do not prescribe a specific form for complaints. An accounting therefore requires a review of communications to the Committee from members of the public. Those communication are spread across multiple dockets and transcripts of public hearings.

13. The Subcommittee reviewed all dockets involving the Antrim Wind facility to determine if there were any operational complaints that have been made for which a recommendation has not been made to the full committee. The following were reviewed to find any possible additional complaints: (1) No. 2015-02, (2) No. 2015-02 Post-Certificate Filings, (3) No. 2019-01, and (4) No. 2021-02.

14. The attached spreadsheet represents the Subcommittee's full accounting of all possible complaints received by the Committee. Because there is no definition of what constitutes a "complaint," the Subcommittee decided that any communications from neighbors or those affected by operations that allege certificate or regulatory violations, would be considered complaints. The Subcommittee did not recognize other communications as operational complaints, including comments about the investigatory process, the Subcommittee's interpretation of rules, or any subject matter other than a complaint about a specific violation.

15. As the Spreadsheet shows, the Subcommittee recognized fifteen (15) communications as potential operational complaints that have not been addressed by the Subcommittee and Committee. They are the following:

A. Sound Complaints:

- March 2, 2020 Barbara Berwick Communication
- May 14, 2021 Berwick and Others Communication
- July 1, 2021 Barbara Berwick Communication
- August 11, 2021 Janice Longgood Communication
- January 10, 2022 Janice Longgood Communication
- May 1, 2023 Janice Longgood Communication

B. Aircraft Detection Lighting System ("ADLS") Complaints:

- February 28, 2020 Richard Block Communication
- March 13, 2020 Barbara Berwick Communication
- April 30, 2020 Richard Block Communication
- August 13, 2020 Richard Block Communication

- March 25, 2021 Richard Block Communication
- July 20, 2021 Richard Block Communication
- February 2, 2023 Richard Block comment at Public Meeting
- April 28, 2023 Richard Block Communication.
- May 15, 2023 Richard Block comment at Public Meeting

16. The Subcommittee divided the complaints into three categories: (1) sound complaints, (2) ADLS complaints that predate or are around the time of the Vose Complaint in May 2021, and (3) ADLS complaints post-dating the Vose complaint.

17. With regard to the sound complaints, the Committee’s March 9, 2022 order approved the Subcommittee’s recommendation, including Paragraph 85 of its August 23, 2021 Recommendation concerning Charge 1. Paragraph 85 outlined a procedure for evaluating sound complaints. It provides that if “the Subcommittee accepts the findings of any field survey, it shall recommend to the full Committee denial of a complaint if the field survey does not validate the complaint.” In its May 15, 2023 Public Meeting, the Subcommittee voted to accept the April 26, 2023 HMMH Sound study. That study found that “Antrim Wind complies with the SEC noise limits.” Therefore, the Subcommittee is required by the Committee’s order to recommend that the Committee take no further action on any sound complaint that predated the HMMH study. That includes the following:

- March 2, 2020 Barbara Berwick Communication
- May 14, 2021 Berwick and Others Communication
- July 1, 2021 Barbara Berwick Communication
- August 11, 2021 Janice Longgood Communication
- January 10, 2022 Janice Longgood Communication

18. The only sound complaint that postdated the HMMH study was Ms. Longgood's May 1, 2023 email.¹ Ms. Longgood took issue with HMMH's methodology, specifically, the placement of the sound monitors on state property, instead of on homeowners' properties. She also stated that "I continue to experience loud disruptive noise on an intermittent basis depending on the days and the weather."

19. The Subcommittee recommends to the full Committee to take no further action on this May 1, 2023 email. The Complaint lacks specifics on dates and times for supposed violations post-dating the HMMH study and provides no data or other basis to determine a violation. In addition, HMMH's acoustic expert, Christopher Menge testified 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 HMMH study thus does not support violations occurring at Ms. Longgood's residence. In addition, the Subcommittee reviewed an earlier sound study by Cavanaugh Tocci of the sound levels at 80 and 88 Reed Carr Road, the residences of two of the complainants, Amanda Buco and Erin Morrison (Ms. Berwick also lives on Reed Carr Road). The Tocci study, similar to the HMMH study, concludes that "AWE wind turbine sounds likely conforms to the limits of NH Code Admin. R. Site 301.14(f)(2a)."

Analysis of ADLS Complaints Concerning 2020 and 2021 Operations

¹ Ms. Longgood's is dated April 29, 2023, but was included in a single May 2, 2023 submission from several opponents of the facility. The Subcommittee labeled the communication as occurring on May 1, 2023, which is the date of the first email in the submission.

20. The Subcommittee previously recommended no further action on the May 6, 2021 Vose complaint, finding that ongoing maintenance and a four-week “override” period in May 2021 (during which the lights were illuminated constantly) did not violate the facility’s certificate. As stated, the full Committee accepted the Subcommittee’s recommendation at its July 24, 2021 public meeting.

21. The facility’s certificate does not contain any metrics for how often the lights may illuminate. The facility takes the position that it is only required to abide by FAA regulations, which require illumination when the system is down. Thus, the facility seems to take the position that it has no obligation to reach any sort of illumination level. However, counsel for the public, the Attorney General’s office, informed the Subcommittee in a May 21, 2021 letter that it interpreted the Certificate, along with the order granting the certificate, as requiring “functional ADLS lighting.”

22. The Subcommittee did not decide whether the facility’s interpretation or the Attorney General’s office interpretation was correct because even under the Attorney General’s more restrictive interpretation, the Subcommittee did not believe there was a violation.

23. Apart from three complaints (Mr. Block’s July 2021 communications and his February and May 2023 comments), all complaints related to the ADLS predate the Subcommittee’s handling of the Vose complaint and the upgrade and maintenance work conducted by the facility in May 2021. The facility notified the SEC on June 1, 2021 that it had completed the anticipated upgrade work on the ADLS system.

24. Specifically, the following complaints predate the completion of this work and the Subcommittee’s investigation of the Vose Complaint:

- February 28, 2020 Richard Block Communication
- March 13, 2020 Barbara Berwick Communication

- April 30, 2020 Richard Block Communication
- August 13, 2020 Richard Block Communication
- March 25, 2021 Richard Block Communication

25. The Subcommittee recommends to the full Committee that it take no further action on the ADLS complaints that predate the Vose complaint and the completion of ADLS upgrade work. Those complaints were about lighting conditions before significant work was done on the system. The complaints therefore concern lighting conditions that are inapplicable after the facility’s May 2021 upgrade work, and because after the work, the system was “functioning,” the Subcommittee recommends no enforcement action on those complaints.

Analysis of Complaints Post-dating Vose Complaint

26. The only remaining complaints are four communications from Mr. Block concerning operation of the ADLS after the May 2021 ADLS work was completed. They are:

- July 20, 2021 Richard Block Communication
- February 2, 2023 Richard Block comment at Public Meeting
- April 28, 2023 Richard Block Communication.
- May 15, 2023 Richard Block comment at Public Meeting

27. Mr. Block maintained in his July 2021 communication that after the upgrade work, the ADLS system was still not operating as expected. He says that the maximum amount of time the lights were off in June 2021 was 74% of the time, which is less than the 99% he says was expected.

28. However, according to reports from the facility and its responses (attachment J) to the Subcommittee’s information requests, the median percentage of time the lights were illuminated, after the upgrade, were as follows:

- June 2021: 44.27%
- July 2021: 36.23%
- August 2021: 43.06%

- September 2021: 62.51%²
- October 2021: 31.17%
- November 2021: 27.29%
- December 2021: 18.51%

29. Because the data shows generally steady decrease in the amount of illumination time (apart from a maintenance period in September 2021) and a “functioning” system, the Subcommittee recommends that the Committee conclude there was no certificate violation and that it take no further enforcement action with respect to Mr. Block’s July 2021 complaint.

30. Mr. Block’s three other complaints are from 2023. He commented in two of the Subcommittee’s 2023 public meetings that for several years the facility’s lights “flash all night, every night,” are on “90 percent of the time,” and that on February 2, 2023 he witnessed the lights flashing even though flight data from the internet showed no planes in the area. He also stated in his April 28, 2023 email that from February 3, 2023 to the date of the email the ADLS had illuminated every night at all hours of the night.

31. Administrator Biemer investigated the complaints about the 2022-2023 ADLS functioning. The summary of his findings were adopted by the Subcommittee at its September 1, 2023 public meeting and are attached.³ As the Administrator determined, the median time illuminated per day for the entire time period (from January 2022 to August 2023) is 29.38%, while the average time is 43.22%.

² The facility reports that the percentage illumination figure is high in September 2021 because the system underwent two weeks of routine maintenance during which the system was set to illuminate in accordance with FAA regulations.

³ The Subcommittee also voted at its September 1 meeting to have Administrator Biemer communicate the Subcommittee’s decision and reasoning to the Committee.

32. The median time is roughly in line with the percentages for the 2021 period. However, the average time is higher than the median because Mr. Block is correct that the system has been illuminated 100% of the time for two large periods of time in 2022 and 2023. Specifically, the facility reported to Mr. Biemer that the facility's system was constantly illuminated for a period of 55 days, beginning on June 13, 2022, and a period of 89 days, beginning on February 18, 2023.

33. A chart from the facility, showing a monthly trendline and the two periods of 100% illumination, is attached for the Committee's reference.

34. The facility reported, and Mr. Biemer confirmed through an inspection at the facility, that the system illuminated during those times because of equipment failures. Mr. Biemer also confirmed the equipment replacement was dependent on a single manufacturer. That, along with supply chain issues, led to the lengthy delays.

35. The Subcommittee recommends to the full Committee that it take no further action with respect to Mr. Block's three 2023 complaints. The FAA requires illumination when the system is inoperable or malfunctioning. Compliance with FAA rules is a requirement of the facility's certificate at Page 4: "this Certificate is conditioned upon compliance with all conditions of the Determinations of No Hazard to Air Navigation issued by the Federal Aviation Administration which are appended hereto as Appendix IV."

36. Counsel for the public, the Attorney General's office, takes the position the system has to be "functional." Because there is no specific requirement for how often the system can be illuminated, the Subcommittee concludes a 20-30% illumination period (as indicated by the facility's data) is "functional."

37. The Subcommittee noted at its September 1, 2023 meeting that the facility should improve its communication with the Committee and the public. The extended outages in 2022 and 2023 were not disclosed to the Administrator or the Committee. The facility also did not inform the Administrator or the Committee about the lengthy repair work needed during those outages.

38. While not technically required by the terms of the facility's certificate, the facility should be more transparent with the Committee and the public about the operation of the ADLS system. As noted, the system is one of the first in the country and maintenance and technological issues are to be expected. However, when the facility does not explain these issues or what it is doing to maintain the system, it leads to confusion among the public, a loss of confidence in the system, and complaints that the system is not functioning. The Subcommittee recommends that the full Committee consider encouraging, or ordering if appropriate, more regular informational submissions from the facility concerning operation and maintenance of the ADLS.

39. Finally, the Subcommittee requests that it be dissolved.

Summary of Findings and Recommendations

40. In summary, the Subcommittee voted at its September 1, 2023 public meeting to adopt the attached spreadsheet as an accounting of operational complaints through June 7, 2023.

41. It also voted to adopt Administrator Biemer's investigatory findings.

42. It voted to recommend to the Committee that it take no enforcement action on any of the undecided operational complaints. Again, those are

Sound

- March 2, 2020 Barbara Berwick Communication
- May 14, 2021 Berwick and Others Communication

- July 1, 2021 Barbara Berwick Communication
- August 11, 2021 Janice Longgood Communication
- January 10, 2022 Janice Longgood Communication
- May 1, 2023 Janice Longgood Communication

ADLS

- February 28, 2020 Richard Block Communication
- March 13, 2020 Barbara Berwick Communication
- April 30, 2020 Richard Block Communication
- August 13, 2020 Richard Block Communication
- March 25, 2021 Richard Block Communication
- July 20, 2021 Richard Block Communication
- February 2, 2023 Richard Block testimony at Public Meeting
- April 28, 2023 Richard Block Communication.
- May 15, 2023 Richard Block testimony at Public Meeting

43. The Subcommittee requests that it be dissolved.

FOR THE INVESTIGATIVE SUBCOMMITTEE IN DOCKET 2021-02

Andrew Biemer

Andrew Biemer, Administrator