SUBMITTED VIA FEDERAL E-PORTAL

Feb. 5, 2025

John Sinclair, Forest Supervisor
USDA Forest Service, Green Mountain and Finger Lakes National Forests
c/o Clara Kuhn
99 Ranger Road
Rochester, VT 05767

RE: Deerfield ADLS Construction Permit #67308

Dear Forest Supervisor Sinclair:

On behalf of the WindAction Group, thank you for the opportunity to comment on Deerfield Wind, LLC's permit application to install radar-activated lighting at the Deerfield wind energy facility.

The WindAction Group participated in the adjudicative process for Deerfield Wind, LLC (Docket #7250), which led to the company receiving a Certificate of Public Good (CPG) from the Vermont PUC. While the Vermont permit did not require an Aircraft Detection Lighting System (ADLS), we understand that the Forest Service has made it a requirement.

We also intervened in the New Hampshire Site Evaluation Committee's (SEC) review of Antrim Wind, LLC (AWE), which involved the construction of a nine-turbine wind facility in Antrim, NH. AWE committed to installing a Terma ADLS system, but our experience with it was disastrous.

The purpose of this letter is to share our experience so that the Forest Service and the Vermont public can avoid similar problems and frustrations.

AWE and the ADLS approval

During that AWE proceeding and the months after the project was placed in service, the public and the SEC were repeatedly misled by Antrim Wind regarding the reliability of the Terma ADLS system. The following text excerpted from a letter to the SEC by three NH State legislators briefly summarizes the expectations set by AWE:[1]

> *Antrim Wind Energy LLC ("AWE") agreed to utilize an Aircraft Detection Lighting System ("ADLS") as part of the operating Facility. (SEC Decision and*

[1] https://www.nhsec.nh.gov/projects/2015-02/post-certificate-filings/2015-02_2020-04-17_ltr_chair_constituent_concerns.pdf

Order, March 17, 2017 at 154) ADLS systems "permit wind turbine obstruction lights to remain off at all times unless an aircraft is operating in the vicinity of the wind farm, thus greatly reducing nighttime lighting at these wind projects. (Antrim Wind Visual Assessment, April 27, 2015 at 37) Antrim Wind testified that it "virtually eliminated any nighttime visual affect through its commitment to employ an Aircraft Detection Lighting System". (Antrim Wind Energy, LLC Post Hearing Memorandum November 30, 2016 at 30)

The Subcommittee under Docket 2015-02 found that turbine lighting at Facility (sic) would not have an unreasonable adverse effect on health and safety provided the Facility is equipped with the ADLS. (SEC Decision and Order, March 17, 2017 at 156) The Subcommittee required the ADLS be installed prior to the Facility going into operation. (SEC Decision and Order, March 17, 2017 at 156) The Subcommittee also required AWE to file with the SEC administrator the FAA determination of no hazard pertaining ADLS upon its receipt. (SEC Decision and Order, March 17, 2017 at 156)

Post-Constructions Excuses

The Antrim Wind project began operation in December 2019. After construction, residents reported that the turbines remained lit for hours on most nights. Despite Antrim Wind's assurances that the issue had been resolved, the problem persisted.

Antrim Wind offered multiple and conflicting explanations for why its ADLS failed to function as promised. These included ice buildup on the radar, a defective 30-meter radar motor, and a continuous communication/control error between system components.

After months of complaints, Antrim Wind dismissed concerns by claiming that the ADLS was solely for aviation safety. This is incorrect. FAA lighting ensures aviation safety, while ADLS is meant to prevent unnecessary nighttime illumination. While the project must follow FAA lighting rules, it also must meet the SEC requirement to protect residents from excessive flashing lights at night.

By March 2021, with complaints still unresolved, the SEC convened a special subcommittee to investigate. In response, Antrim Wind argued that its permit only required installation of an ADLS—not that it actually limit nighttime lighting. In other words, the system was installed, but its effectiveness was not guaranteed.

After months of further testing, Antrim Wind made some improvements but still insisted that having the turbines lit 20-30% of the time was acceptable.

NH Senior Assistance Attorney General K. Allen Brooks responded to AWE this way:[2]

The purpose of the ADLS is to ensure that the lights are off as much as possible. Similar comments asserting that the mere physical existence of the ADLS, rather that its successful operation, satisfies the Certificate are an affront to those living

[2] https://www.nhsec.nh.gov/projects/2021-02/documents/2021-02_comments_counsel_for_public_10-11-2023.pdf

in the community who participated in the certification process and who now have to tolerate the lights being on far in excess of what he Certificate allows.

He goes on to state:

I simply do not accept statements that it is sufficient for the system to be in place even if it is not operating in a manner that as least approximates what was promised by the applicant. The SEC allowed the Antrim Wind Facility to forgo the visual impact analysis by rule based on its assertion that the ADLS would work to achieve a result where "for the most part, there will be no lighting at night of the facility." Even at its best performance the lights at the facility are on, on average, approximately two hours per night, every night. This poor performance combined with continuing periods of complete shut down demonstrate that the ADLS has failed.

The problem of lighting continues but after years of fighting, the public eventually gave up.

The Terma ADLS system requires careful, and regular calibration, particularly when operated in forested, mountainous terrains. Terma informed AWE that a test flight test should be flown during a period of full-foliage cover to assess the ADLS' functionality.[3] Terma also warned that "[d]ue to the geographic relief and tree canopy around the Antrim Wind facility, a land "mask" was required to prevent the ADLS system from activating turbine lights due to detections of the tree canopy. lt is anticipated that each year this mask may change based on how the surrounding tree canopy propagates."[4]

Recommendations

As the Forest Service reviews the Deerfield Wind application, we urge you to consider the problems experienced in New Hampshire. To avoid similar issues, we recommend the following:

1. Set a Clear Limit on Nighttime Lighting
    - Define a specific percentage of time the lights must remain off at night.
    - Deerfield Wind should conduct a survey of anticipated air traffic within both the 3-mile lateral and 1,000-foot vertical range of the turbines. This data could help determine an appropriate percentage.
    - Regardless of the approach, a strict limit must be established to ensure compliance.

2. Require Regular ADLS Testing
    - The permit should require Deerfield Wind to test the ADLS annually to ensure that changes in the tree canopy or other moving objects do not falsely trigger the lights.
    - This aligns with Terma's own recommendations for maintaining system accuracy.

3. Verify Performance Claims

[3] Attachment J, Antrim Responses to the NHSEC Subcommittee information requests of December 6, 2021 at pdf page 8, January 31, 2022. https://www.nhsec.nh.gov/projects/2021-02/documents/2022-01_attachments_i-q.pdf
[4] *Id* at pdf page 7

- Do not rely solely on Deerfield Wind's statements about ADLS performance and calibration.
- The Forest Service should independently confirm these claims directly with Terma to ensure accuracy.

4. Improve Public Transparency & Reporting
    - Clearly communicate the Forest Service's ADLS requirements to the public.
    - Establish a reporting system so residents can notify the Forest Service if Deerfield fails to address excessive nighttime lighting.

By implementing these measures, the Forest Service can help prevent the same pitfalls and frustrations that occurred in New Hampshire.

Thank you for the opportunity to comment. If you have questions regarding the enclosed information, please reach me by email at llinowes@windaction.org or by phone at 603-838-6588.

Sincerely,

--Lisa Linowes

On behalf of the WindAction Group