



ACK Residents Against Turbines

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March 13, 2025

VIA MAIL AND ELECTRONIC SUBMISSION

Nantucket Residents Against Turbines

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Office of Environmental Review

U.S. EPA Region 1

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Boston, MA 02109-3912

Timothy Timmermann, Director; timmermann.timothy@epa.gov

Re: ACK For Whales Requests the Reopening and Reanalysis of Clean Air Act Permits for Park City Wind LLC's New England Wind 1 Outer Continental Shelf (OCS) Air Permit No. OCS-R1-07 and Park City Wind LLC's New England Wind 2 OCS Permit No. OCS-R1-08

Dear Regional Administrator:

This Petition is submitted pursuant to 40 CFR 55.6(a)(3) which incorporates 40 CFR 71.11(n), the latter of which allows for "Public petitions to the permitting authority," and in subsection (1), which provides in pertinent part, "Any interested person (including the permittee) may petition the permitting authority to reopen a permit for cause, and the permitting authority may commence a permit reopening on its own initiative." As such, ACK For Whales, respectfully requests that the **EPA reopen the above captioned air permits for cause, and find that these preconstruction air**

permits warrant reanalysis and potential revocation under the Clean Air Act (“CAA”) for the reasons set forth below.

The New England Wind 1¹ and 2² preconstruction air quality permits were issued pursuant to 40 CFR part 55 on April 15, 2024.

Analytic Deficiencies Common to Both New England Wind 1 and 2 Permits

[1] Incomplete assessment of blade failure and repair emissions.

The analysis and attendant fact sheets for New England Wind 1 and 2 do not appear to account for emissions related to and resulting from blade failures, which would warrant emergency repairs or replacement activities. This could involve emissions from specialized heavy-lift vessels (HLVs), additional transport vessels, which could significantly increase volatile organic compounds (VOC), NOX, and particulate matter (PM10 and PM2.5).

Moreover, there is a deficiency in analysis regarding emissions eventuating from operational maintenance/servicing. Customary wear and tear on turbine blades and unanticipated failures due to severe weather conditions should have been explicitly analyzed for emissions. This would also lead to an underestimation of potential emissions.

Furthermore, the analysis mostly focuses on routine operations and worst-case annualized emissions from construction and operation phases but appears to lack dispersion modelling for short term emission spikes induced by emergencies (blade failures/repairs). This could lead to temporary exceedances of NAAQS for pollutants such as NOX and PM.

¹ <https://www.epa.gov/caa-permitting/permit-documents-new-england-wind-1-wind-energy-development-project>

² <https://www.epa.gov/caa-permitting/permit-documents-new-england-wind-2-wind-energy-development-project>

[2] The EPA decision to group Vineyard Wind 1, New England Wind 1 and New England Wind 2, as a single stationary source is both legally questionable and could have the effect of masking localized emission spikes

There are three separate criteria that must be satisfied in order for “single stationary source to apply”, a) the projects must be classified under the same Standard Industrial Code, b) the projects must be contiguous, and c) there must be common control.

As to [c], Vineyard Wind 1, unlike NEW 1 and 2, is a 50/50 joint venture of Avangrid Renewables, LLC and Copenhagen Infrastructure Partners. This introduces operational and decision-making independence for VW1 which critically undermines the “common control prong.”

Note that if VW1 were considered a separate source, emissions would be calculated/evaluated independently against the relevant standards (PSD, etc.). When sources are grouped together, emissions are aggregated for purposes of modeling, which can sometimes dilute the detection of localized impacts from activities (for example, construction emissions, high vessel traffic induced emissions, or emergency scenario induced emissions). When projects are assessed individually and independently, short-term spikes in emissions become clearer, such as is integral for assessing compliance with 1-hour NOX.

During blade repairs and other emergencies, short term emissions (for example, from diesel generators, heavy lift vessels) would be imputed to the culpable project (rather than diluted in aggregation) potentially revealing violations of the 1-hour NO₂ NAAQS or other short-term standards.

Independent analysis via dissociating the sources would also warrant compliance with Best Available Technology (BACT) / Lowest Achievable Emission Rate individually.

As such, the EPA should reopen and reanalyze the emissions produced from NEW 1 and NEW 2 as a single source and VW1 as a single source. Such an analysis could reveal short term emission spikes particularly during construction (1-hour standards) which were otherwise aggregated and diluted/diffused via combining all three projects into a single stationary source.

[3] Insufficient Consideration of Cumulative Vessel Emissions Could Lead to 1-Hour NO₂ Exceedances

The preconstruction air permits for NEW 1 and NEW 2 inadequately address the cumulative effects of concurrent vessel emissions, possibly resulting in exceedances of the 1-hour NAAQS for NO₂.

Primary sources of vessel emissions:

- construction activities (Heavy-lift vessels, jack-up barges, and anchor-handling tug supply vessels used for foundation installation, cable-laying, and turbine assembly; Crew transfer vessels (CTVs) and support vessels operate continuously to transport personnel and equipment).

- operational and maintenance activities (Service operation vessels, CTVs, and auxiliary vessels).

- emergency situations (additional vessels deployed for blade failures and repairs, or cable malfunctions) leading to short term spikes in emissions.

The data provided indicate that there are deficiencies in terms of accounting for situations wherein numerous vessels operate concurrently, such as contemporaneously heavy lift vessels installing foundations while cable laying vessels and CTVs transport materials and personnel. During these high operation periods, innumerable (potentially 10+) vessels can potentially be operating concurrently within a concentrated zone, generating overlapping emissions plumes. While the data provided focuses on annualized emissions, there is a lack of modelling on 1-hour NO₂ impacts of vessel emissions, particularly during high intensity construction (or emergency) activities. These emissions can induce concentrated plumes of NO₂. Furthermore, there is a lack of modeling on stable atmospheric conditions in the context of contemporaneous vessel operations in concentrated areas, and the resultant impacts on 1-hour pollutants. And finally, VW1 and other adjacent project emissions – i.e., if multiple projects feature high intensity construction activities concurrently, would the overlapping emissions plumes result

in exceedances of any the 1-hour standards? This appears to be unelucidated in the provided data.

As such, the EPA should model/quantify the worst-case emissions scenarios (e.g., through Gaussian dispersion models or otherwise), the total NOX emissions from contemporaneously operating vessels (various permutations – 5, 8, 10, more, etc. of vessels), under worst case stable atmospheric conditions, and including background NO₂ levels. These scenarios should also be modelled in the context of possible concurrent project construction activities proximate to NEW 1 or NEW 2 (e.g., VW1).

Without extensive modelling on contemporaneously operating vessels in high intensity construction periods and stable atmospheric conditions, it is not a certainty that compliance with 1-hour NO₂ standards is ensured.

[4] The Emissions From Pile Driving, such as hydraulic hammering, are not Adequately Modelled in Isolation or Synergistically

In concert with the determinants discussed in [3], hydraulic hammering during pile driving produces significant short-term emissions via hydraulic hammers, Hydraulic power units, and vessels, and heightened activity from vessels / ancillary equipment. Such emissions can occur in concentrated bursts, increasing the probability of localized exceedances of the 1-hour NO₂ NAAQS (188 µg/m³).

Note that during peak construction phases, pile driving emissions can occur coterminous with emissions from vessels transporting personnel / materials, and/or equipment. This can amplify NOX concentrations.

Critically, there is apparently a lack of short-term modelling for worst-case short-term effects from contemporaneous vessel operations (i.e., multiple vessels operating concurrently during construction) and pile driving activities (i.e., hydraulic hammering emissions). The emissions from hydraulic hammering do not appear to be separately modeled either, in either analysis for NEW 1 or NEW 2.

Finally, not only is the above set of conditions not modelled under stable atmospheric conditions, what about during conditions of temperature inversions? Temperature

inversions have the capacity to trap pollutants near the surface, worsening concentrations of NO₂. There is no evidence that this was adequately (or at all) modelled, namely, contemporaneous vessel operations and pile driving at peak construction activity in the presence of temperature inversion conditions. Such modelling might reveal potential exceedances of the 1-hour NOX standards. As a real-world example, Vineyard Wind 1 Mariner Update for the Week of March 10, 2025 indicates 28 currently vessels.³ Contextualizing for NEW 1 and NEW 2, EPA should run modelling iterations of putative 1-hour NOX as a function of different numbers of concurrently operating vessels (under different atmospheric conditions and background emissions, most notably, stable atmospheric conditions). The potential would be heightened for exceedances of the 1-hour NOX standard in concentrated regions.

Conclusion

Due to the above cited reasons, the analytic deficiencies in the NEW 1 and NEW 2 preconstruction air permits are significant and therefore warrant a reopening, re-examination and potential revocation of these permits.

Thank you for your careful attention to these important matters.

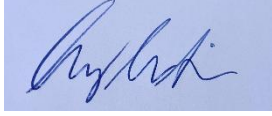
Respectfully submitted,

Thank you for your consideration of these comments.

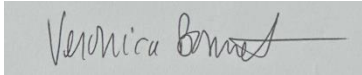
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³ https://info.vineyardwind.com/weekly-report-active-offshore-wind-mariner-updates-1740410053173?ecid=ACsprvtdTMVU_ta8R-ITW6Ny_tZUAL51Ki1x5-3twyU0Y0DtN12hlgp_eqsW19032NIIPq8BagKS&utm_campaign=Weekly%20OWMUs&utm_medium=email&_hsenc=p2ANqtz-8OrK2iR6UYO1IJcT6HPWFuesz269JVh9AXCBbt-QbGtKVZ9SSVVU_O_xq9hlPppxr8e2Tl2WF9-tQlhJqOZ1jOycB4hbF88TxpDcbEr_3qxWaNfIY&_hsmi=351010064&utm_content=351010064&utm_source=hs_email

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