



UNITED STATES ENVIRONMENTAL PROTECTION  
AGENCY  
REGION 1  
5 Post Office Square, Suite 100  
Boston, MA 02109

**MEMORANDUM**

**SUBJECT:** Concurrence Request for Approval of Alternative Model AERCOARE in Conjunction with AERMOD, in Support of Outer Continental Shelf PSD air permitting of the New England Wind, Phase 2

**FROM:** Jay McAlpine, Regional Air Permit Modeler (on detail)  
Air Permits, Toxics, and Indoor Programs Branch, Air and Radiation Division  
EPA Region 1, Boston, Massachusetts

**THRU:** Lynne Hamjian, Director  
Air and Radiation Division  
EPA Region 1, Boston, Massachusetts

**TO:** George Bridgers, Director of Model Clearinghouse  
Air Quality Modeling Group, Office of Air Quality Planning and Standards

The U.S. Environmental Protection Agency (EPA) Region 1 seeks concurrence from the Model Clearinghouse regarding the prospective EPA Region 1 approval of an alternative model for an Outer Continental Shelf (OCS) Prevention of Significant Deterioration (PSD) permitting effort. Specifically, Region 1 seeks concurrence on the use of the AERCOARE meteorological data preprocessor program to be used in conjunction with AERMOD (AERCOARE/AERMOD) in conducting an air quality modeling analysis for the proposed Commonwealth Wind, LLC (Commonwealth Wind) PSD permit application. Commonwealth Wind is also known as the New England Wind Phase 2 project (Phase 2) and is located off the coast of Massachusetts near Martha's Vineyard.

The EPA approved the use of the AERCOARE/AERMOD modeling method on January 28, 2022 for the first phase of the New England Wind project, known as the Park City Wind project,<sup>1</sup> (Phase 1). New England Wind has sought approval to allow the use of the AERCOARE/AERMOD model for the air quality modeling analysis for the Phase 2 project also, under 40 CFR Part 51, Appendix W §3.2.2(b), Condition (3), for the project's OCS PSD permit application. Under Condition (3), an alternative model may be used if the Regional Office finds the conditions specified in Appendix W §3.2.2(e) are satisfied. In this Phase 2 request, New England Wind relies on the rationale presented in the original request and EPA approval for the Phase 1 project, noting the projects are in the same general geographic area and there are no significant differences in how the model would be applied.

The EPA has conducted a thorough review of this additional request and intends to approve the use of AERCOARE/AERMOD as an alternative model to conduct the air quality modeling analysis as part of the New England Wind Phase 2 project. The EPA agrees with the conclusions of New England Wind, notably the Phase 2 project occurs in essentially the same geographic area as the Phase 1 project and is

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<sup>1</sup> 2022 Park City Wind AERCOARE/AERMOD approval; refer to the EPA Model Clearinghouse Record No. 22-I-01 located at: <https://cfpub.epa.gov/oarweb/MCHISRS/index.cfm?fuseaction=main.resultdetails&recnum=22-I-01>

therefore exposed to the same general climatic conditions. The Phase 2 project is larger than Phase 1 (1232 MW and 804 MW, respectively), but total project emissions and geographic extent are relatively similar, and the differences matter not in the application of AERCOARE/AERMOD in this case. The EPA has also confirmed the model settings, methodology, and conditions-of-use presented in a modeling protocol for the Phase 2 project match those specified for the Phase 1 project (as disclosed in the Technical Support Document for the January 2022 AERCOARE/AERMOD approval)

Based on our professional judgment, no additional model evaluation is necessary given the similarities in proximity and development schedule of Phase 1 and Phase 2. Additionally, the Phase 1 technical justification sufficiently addresses any concerns or considerations of modeling technique that is being proposed for use on Phase 2. The EPA finds the technical analysis provided for the Park City Wind AERCOARE/AERMOD approval<sup>2</sup> is fully applicable to the New England Wind Phase 2 project, except only in the description of the project. We request your concurrence on our finding to approve the alternative model AERCOARE in conjunction with AERMOD in support of OCS PSD air permitting of New England Wind Phase 2.

Please feel free to contact Jay McAlpine of my staff at (206) 553-0094 if you have any questions regarding the request.

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<sup>2</sup> 2022 Park City Wind AERCOARE/AERMOD approval; refer to the EPA Model Clearinghouse Record No. 22-I-01 Technical Support Document at [https://gaftp.epa.gov/Air/aqmg/SCRAM/mchisrs/22-I-01-Region1\\_MCHrequest-ParkCityWind-TSD.pdf](https://gaftp.epa.gov/Air/aqmg/SCRAM/mchisrs/22-I-01-Region1_MCHrequest-ParkCityWind-TSD.pdf)