Attachment 7

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION

FINAL DETERMINATION CONCERNING A PERMIT-TO-CONSTRUCT, PSD APPROVAL, AND NSR APPROVAL APPLICATION SUBMITTED BY US WIND, INC. FOR THE CONSTRUCTION AND COMMISSIONING OF THE MARYLAND WIND OFFSHORE PROJECT

I. INTRODUCTION

The Maryland Department of the Environment (the "Department") received an air quality permit application from US Wind, Inc. on November 30, 2023 (electronically), and hardcopies received on December 7, 2023 for the construction and operation of the Maryland Offshore Wind Project (the Project) consisting of up to 121 wind turbine generators (WTG), up to four (4) offshore substations (OSS), and one (1) meteorological tower (Met Tower). The proposed project will be located approximately 10 nautical miles (NM) off the coast of Worcester County, Maryland on the outer continental shelf (OCS). The application package consisted of an air quality permit-to-construct application, an application for a New Source Review (NSR) Approval, and an application for a Prevention of Significant Deterioration (PSD) Approval.

On Thursday, June 13, 2024, an informational meeting was held at the Ocean City Convention Center, Rooms 201 and 202, located at 4001 Coastal Highway, Ocean City, Maryland, to provide interested parties opportunities to discuss with the Company and the Department the permit application and the proposed construction and commissioning of the offshore wind project.

After reviewing the application and other pertinent information, the Department made a tentative determination to issue a permit-to-construct that would authorize construction of the offshore wind project as proposed in the Company's applications. A draft permit with draft conditions was made available for public review at the following website: [https://mde.maryland.gov/programs/permits/AirManagementPermits/Pages/U.-S.-Wind-Maryland-Offshore-Wind-Project-.aspx] and at MDE headquarters located at 1800 Washington Boulevard in Baltimore, Maryland 21230. A Notice of the Tentative Determination, Public Hearing, and Opportunity to Submit Written Comments was published in the Worcester County Times on December 5, 2025, and again on December 12, 2024.

On January 9, 2025, a public hearing was held at the Ocean City Convention Center, Rooms 215, located at 4001 Coastal Highway, Ocean City, Maryland, to provide the public with an opportunity to submit comments on the Department's Tentative Determination and draft permit and approval documents.

II. COMMENTS RECEIVED AND THE DEPARTMENT'S RESPONSE

The public comment period on the application initially expired on January 13, 2025, but was extended until March 17, 2025 following public request for a one-time, 60-day extension. The comments received at the public hearing, and those submitted in writing during the public comment period, expressed concerns about the impact of the proposed new installation on the surrounding community. The Department's responses to the comments are attached.

III. DEPARTMENT'S FINAL DETERMINATION

The Department has reviewed the application and the comments received and has determined that the proposed construction and commissioning of the offshore wind project would not cause violations of any applicable air pollution control regulations.

The Department has made a final determination to issue the permit-to-construct, the PSD Approval, and the NSR Approval. A copy of the final permit and approval documents are included in the public docket.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINSTRATION
RESPONSE TO COMMENTS
FOR THE
US WIND INC. - MARYLAND OFFSHORE WIND PROJECT
APPROXIMATELY 10 NAUTICAL MILES OFF THE COAST OF
WORCESTER COUNTY, MARYLAND

Hearing Date: January 9, 2025
Ocean City Convention Center
4001 Coastal Highway
Ocean City, MD 21842

Purpose of the Hearing:
The purpose of the public hearing was to receive comments on the Maryland Department of the Environment's Tentative Determination for an air quality permit to construct application submitted by US Wind, Inc. for the installation of up to 121 wind turbine generators, up to four (4) offshore substations, and one (1) meteorological tower to be located approximately 10 nautical miles off the coast of Worcester County, Maryland.

Attendance:
Approximately 95 members of the general public attended the hearing. The hearing was also attended by Maryland State Senator Mary Beth Carozza, District 38; Delegate Wayne Hartman, District 38C; Commissioner Anthony Bertino, Worcester County; Commissioner Joe Mitrecic, Worcester County; Chief Administrative Officer Weston Young, Worcester County; Robert Mitchell, Director of Environmental Programs, Worcester County; Mary Knight, Worcester County Planning Commission; Mayor Richard Meehan, Ocean City; Town Administrator Terence McGean, Ocean City; and Mayor Natalie Magdeburger, Fenwick Island, Delaware. Ms. Shannon Heafey of the Air and Radiation Administration (ARA) of the Maryland Department of the Environment (MDE or the Department) presided as Hearing Officer. Mr. Mario G. Cora presented ARA's hearing statement. US Wind, Inc. was represented by Mr. Dave Wilson. Mr. George Quade from For the Record, Inc. served as the hearing's court reporter.

Comment Period:
The comment period was open from December 5, 2024 through March 17, 2025, following a request for a one-time 60-day extension to the initial 30-day comment period. Comments were received from the public both at the hearing and in writing during the comment period. Some comments included references to, or copies of, publications such as newspaper articles, blogs, or study reports. The Department reviewed these references as part of our effort to evaluate and respond to the comments. MDE's assessment of these materials are addressed in the responses to each comment below, as applicable.

The public hearing transcript and written comments received are enclosed with this document.

In addition to adverse comments received as indicated in the Index on the following page, the MDE received over 75 comments expressing support for the project for the following reasons: the project will bring positive air quality impacts (generate clean energy and renewable energy, mitigate climate change, reduce air pollution due to net emissions reduction), the project will create jobs, the project is an additional source of electricity, and the project will protect public health and the environment.

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Air Quality Issues

Other Issues

Comments and Responses:

Comment 1 – Daily Emissions Limits

US Wind, Inc. requested that the values in Table 4 of the draft PSD approval be increased based on the results of the modeling for simultaneous operations during the OSS Installation and OSS Commissioning Periods.

The limits in Table 4 of the draft PSD were based on only a single operation (i.e., Foundation Installation) and included vessels when operating in a maneuvering mode when near to an OSS or WTG. US Wind, Inc. proposed daily limits which included nine (9) operations discussed in the footnotes to Table 4 (and Table 1A of the draft PSD approval) and the contributions from both vessel transit and maneuvering modes of operation. US Wind, Inc. performed supplemental modeling which demonstrated compliance with the NAAQS and PSD increments

The following Table 4 shows the proposed changes that US Wind, Inc. requested to be included in the final PSD approval.

Table 4 – Daily Emissions Limits Pollutant Maximum C&C and O&M (tpd)

Pollutant	Maximum C&C during OSS Installation Periods[1] combined with O&M (tpd)	Maximum C&C during OSS Commissioning Periods[2] combined with O&M (tpd)	O&M (tpd)
NO_2	30.06	29.54	4.52
CO	3.37	3.89	0.59
PM-10	0.32	0.28	0.06
PM-2.5	0.31	0.27	0.05

1. OSS Installation Period consists of the following: Scour protection installation, WTG Installation, WTG Commissioning, OSS Installation (the Vessels listed as OSS Installation Vessels in Table 1A, excluding the Refueling Offshore Service Vessel and Hotel Jack-up Vessel), Inter-Array Cable Installation, Offshore Export Cable Installation; and O&M activities.

2. OSS Commissioning Period consists of the following: Foundation Installation, Scour protection installation, WTG Installation, WTG Commissioning, OSS Commissioning (the Vessels listed as OSS Installation Vessels in Table 1A, excluding the Heavy Lift Vessel, Tug, Topside Tug, Noise Mitigation Offshore Service Vessel, and Acoustic Monitoring Offshore Service Vessel), Inter-Array Cable Installation, Offshore Export Cable Installation; and O&M activities."

MDE Response

US Wind, Inc. performed supplemental NAAQS and PSD Increment modeling analyses for the OSS Installation and Commissioning Periods described in their letter of comments. This process was performed to ensure compliance during simultaneous operations for pollutants with respective short-term standards (1-hour and 8-hour CO, 1-hour NO2, and 24-hour PM-2.5 and PM-10). US Wind, Inc. provided all the modeling data files for the modeling analyses and tables of daily emissions to determine the maximum ambient concentrations to the Department for verification. The modeling analyses and its results were reviewed by the Department. The calculations that support the development of the requested daily emissions limits were also reviewed by the Department.

The NAAQS modeling analysis for each of the Offshore Substation (OSS) Installation or Commissioning Periods were reviewed by the Department. The results were summarized and presented in a table depicting the fact that the project impacts, plus background, do not exceed or threaten to exceed the NAAQS.

The results of the PSD Class II increment analysis were also reviewed by the Department. It was demonstrated that the simultaneous operation of multiple construction and Operation and Maintenance (O&M) operations would not cause or contribute to air pollution in violation of any of the applicable PSD Class II increments for pollutants with respective short-term standards (1-hour and 8-hour CO, 1-hour NO2, and 24-hour PM-2.5 and PM-10). The Department also reviewed the Class I increment analysis results for 24-hour PM-2.5 and PM-10, which demonstrated that the project impacts are well below the Class I increments with simultaneous operation of multiple construction and O&M operations.

Following review of the modeling analyses results, MDE concurs with US Wind, Inc. that the results support a revision of the daily emissions limits as requested. US Wind's request was granted by the Department. As such, Part D(2), Table 4 of the PSD Approval now includes the revised, approved limits.

Comment 2 – Simultaneous Operations

As stated in the comment letter, US Wind, Inc. "prepared supplemental NAAQS and PSD increment analyses to demonstrate compliance with the NAAQS and PSD increments for simultaneous (i.e., cumulative) operation of vessels from separate operating conditions."

US Wind, Inc. requested a few changes to the conditions listed in Part E, of the PSD Approval. As a result of their analysis, US Wind, Inc. requested condition E (3) to be updated, and the addition of two more conditions to be listed as E(4) and E(5) in the PSD approval. These revisions are required as part of the updates related to the revised daily limits proposed by US Wind, Inc. in a letter to the Department during the permit comment period. The proposed conditions and the rationale behind the request were presented in the letter of comment to the Department. To further supplement the above-mentioned changes, US Wind, Inc. also proposed the inclusion of an additional record keeping condition to be listed in the PSD Approval.

MDE Response

As stated earlier, US Wind, Inc. performed supplemental NAAQS and PSD Increment modeling analyses for the OSS Installation and Commissioning Periods described in their letter of comments. The described process and the results of the modeling analyses were reviewed by the Department and found to be appropriate.

The Department has updated Part E of the PSD Approval as follows:

"(3) To ensure compliance with the NAAQS and PSD increments and total daily emissions limits in Part D(2), Table 4 (Maximum C&C during OSS Installation Periods combined with O&M) of this Approval, vessels associated with the following activities may be operated simultaneously when each of the individual activities are located greater than 1.25 NM away from each other: WTG Installation, Scour Protection Installation, WTG Commissioning, OSS Installation (the Vessels listed as OSS Installation Vessels in Table 1A, excluding the Refueling Offshore Service Vessel and Hotel Jack-up Vessel), Inter-array Cable Installation, Export Cable Installation, and O&M. The separation distance shall be calculated based on the GPS coordinates of the center point of each activity (e.g., the monopile foundation attached to OCS).

(4) To ensure compliance with the NAAQS and PSD increments and total daily emissions limits in Part D(2), Table 4 (Maximum C&C during OSS Commissioning Periods combined with O&M) of this Approval, vessels from the following activities may be operated simultaneously when each of the individual activities are located greater than 1.25 NM away from each other: Foundation Installation, WTG

Installation, Scour Protection Installation, WTG Commissioning, OSS Commissioning (the Vessels listed as OSS Installation Vessels in Table 1A, excluding the Heavy Lift Vessel, Tug, Topside Tug, Noise Mitigation Offshore Service Vessel, and Acoustic Monitoring Offshore Service Vessel), Inter-array Cable Installation, Export Cable Installation, and O&M. Vessels associated with OSS Commissioning specified above and Export Cable Installation or Inter-array Cable Installation may be operated simultaneously at distances less than 1.25 NM away from each other. The separation distance shall be calculated based on the GPS coordinates of the center point of each activity (e.g., the monopile foundation attached to OCS).

(5) With submittal of the Report in condition C(3), which defines each vessel contracted, each anticipated representative vessel, and each marine and non-marine engine to be used during the initial C&C and O&M of the Maryland Offshore Wind Project, permittee may provide additional modeling for NAAQS and PSD increment compliance, upon approval from the Department, for simultaneous operations at distances less than 1.25 NM."

The Department will also add the following record keeping condition to Part G(1) of the PSD Approval:

"(j) For each vessel deployed during C&C and/or O&M, US Wind, Inc. shall record on a daily basis, the GPS coordinates of the center point of the operation (e.g., the monopile foundation attached to OCS) from the list of the following operations: Foundation Installation, Scour Protection Installation, WTG Installation, WTG Commissioning, OSS Installation, OSS Commissioning, Inter-array Cable Installation, Export Cable Installation, and O&M."

Comment 3 – Total Emissions

A Commenter asked for clarification regarding the total emissions in tons per year that will originate from the proposed construction.

MDE Response

A summary of total emissions is included in Part F, Item (3) of the Permit to Construct (PTC) and copied below. The referenced table shows the limits that US Wind, Inc. must comply with for emissions of NOx, CO, PM_{10}, $PM_{2.5}$, VOC, SO_2, lead (Pb) and GHG (as CO_{2eq}) from the Maryland Offshore Wind Project, including periods of startup, shutdown, and malfunction under each of the following scenarios: (1) total per rolling 12-month period during the Construction and Commissioning (C&C) phase, (2) total for the entire C&C phase which includes both C&C and O&M emissions and begins on the C&C Start Date and ends when the last wind turbine generator to be constructed begins producing commercial power, and (3) total per rolling 12-month period during the Operation and Maintenance (O&M) phase.

The number presented in each of the columns is the maximum emissions limit. As such annual emissions rates are expected to be less than the stated limits for each pollutant under each of the scenarios.

Pollutant	Maximum C&C and O&M, Combined During C&C (tons/rolling 12-months)	Total for the Entire C&C Phase, which includes both C&C and O&M Emissions (tons)	Maximum O&M (tons/rolling 12-months)
NOx	616	1380	25
CO	149	344	24
PM-10	20	45	0.66
PM-2.5	19	44	0.65
VOC	11	26	2
SO_2	2	4	0.07
Pb	0.003	0.007	0
GHG (as CO_2e)	41,673	95,898	6,763

Comment 4 – Emissions Offsets

A commenter stated that "any offsets that are needed for this project should be located in Worcester County." The commenter also stated that Worcester County is the "only county being impacted by this." Another commenter asked "where are the offsets in Worcester County?"

MDE Response

These comments relate to the timing required, the jurisdiction, and the location from which emissions offsets should be obtained. Offsets are also known as "emission reduction credits" or ERCs. ERCs for this project were addressed in Section VII, Emission Reduction Credits (ERCs) of the New Source Review (NSR) Approval.

As stated in the referenced section of the NSR Approval, the offsets of new emissions in a nonattainment area must meet two important objectives:

(1) to ensure reasonable progress toward attainment of the National Ambient Air Quality Standards (NAAQS). (As such, the offset ratio must be greater than 1.0); and

(2) to provide a positive air quality benefit.

Emissions credits must come from the same non-attainment area or an area with an equal or higher nonattainment classification which contributes to nonattainment in the corresponding onshore area of an outer continental shelf source. 42 U.S.C. § 7503(c); 42 U.S.C. § 7627.

Citing Clean Air Act Section 173 (a)(1)(A) and Section 173 (c)(1), as well as 40 C.F.R. Part 51, Appendix S, EPA has determined that offsets apply only to emissions during operation and maintenance. In keeping with these practices, for the Maryland Offshore Wind Project, offsets are required based on operation and maintenance emissions.

In accordance with COMAR 26.11.17.03B(3)(b), the minimum NOx emissions offset ratio for Worcester County is 1.15 to 1.0. The Maryland Offshore Wind Project's potential O&M annual NOx emissions is 25 tons per year; therefore, NOx ERCs in the amount of 29 tons will be required from the same or more restrictive ozone non-attainment area. This requirement is federally enforceable and the ERCs shall be obtained before construction of the project is commenced. US Wind, Inc. must provide updated potential NOx emissions to the Department prior to commencement of construction to confirm that the appropriate amount of ERCs will be obtained.

As stated in Section IV of the NSR Approval, "the Maryland Offshore Wind Project is required to comply with the air quality requirements applicable in Worcester County, the Corresponding Onshore Area (COA). Worcester County is in an attainment/unclassifiable area for the 2008 and 2015 ozone NAAQS, however; because Worcester County is located in the Ozone Transport Region, the Clean Air Act requires major sources of VOC or NOx to be subject to the requirements which would be applicable to major stationary sources if the area were classified as a moderate non-attainment area for ozone. 42 U.S.C. § 7511c(b)(2).

Prior to construction, US Wind, Inc. must obtain the required amount of ERCs to offset the project's emissions. While the ECRs may originate from Worcester County, compliant ERCs may also originate from a moderate or higher nonattainment area which contributes to Worcester County, pursuant to 42 U.S.C. § 7503(c). The Department will verify that ERCs obtained by US Wind, Inc. meet all applicable requirements.

Comment 5 – Sulfur Hexafluoride Emissions

Several comments relate to the air quality impacts associated with sulfur hexafluoride (SF_6) emissions that could be emitted from the project.

A commenter also expressed concerns and stated that the SF6 is used in the turbines, and it is very dangerous. Another commenter stated their concerns regarding the impacts of SF_6 on climate change, due to the high global warming potential greater than carbon.

MDE Response

These comments relate to the potential release of sulfur hexafluoride (SF_6) from the project and their potential air quality impacts.

Sulfur hexafluoride (SF_6) is a synthetic fluorinated compound with an extremely stable molecular structure and unique dielectric properties. According to EPA

(https://www.epa.gov/eps-partnership/sulfur-hexafluoride-sf6-basics, accessed May 14, 2025), "the U.S. electric power industry has used SF_6 in circuit breakers, gas-insulated substations, and other switchgear used in the transmission system to manage the high voltages carried between generating stations and customer load centers."

Section 2.2.3.1 of U.S. Wind's application addresses SF_6 in switchgear:

"US Wind may use sulfur hexafluoride (SF-6) to insulate electrical equipment at each WTG and OSS, potentially resulting in fugitive greenhouse gas emissions from unexpected equipment leakage. Due to its extremely stable chemical properties, SF-6 is commonly used in electrical equipment to provide insulation for switchgear and to quench arcs. However, US Wind has not designed the electric requirements for the WTGs and OSSs and thus, the potential for SF-6 emission, if any, are currently unknown for this OCS air permit application. US Wind will request suppliers to assess the use of SF-6 alternatives, where such equipment would meet the safety and performance requirements of the supplied equipment. If the use of SF-6 alternatives would be technically and economically feasible for any supplied equipment, US Wind will file supplemental greenhouse gas emissions information regarding fugitive SF-6 emissions."

MDE is aware of the potent greenhouse potential of SF_6, when compared to an equivalent amount of carbon dioxide (CO_2), and its impact from a climate change perspective. For practical purposes, this information must be available soon after US Wind, Inc. has finalized the design phase of the electrical equipment for the WTG and OSS, and prior to the delivery and installation of the electrical equipment for the WTG and OSS. At such time, US Wind, Inc. will be required to assess the potential for SF-6 fugitive emissions, notify MDE and adjust the GHG (as CO2e) emission estimates, accordingly.

As stated in Part E(1) of the Permit to Construct, C&C shall not commence until MDE has reviewed and approved these changes. If the updated potential to emit estimates show that any of the regulated pollutants (including greenhouse gas emissions) exceed the thresholds for PSD and NSR review, then the Permittee will be required to perform the appropriate updates to the previous NSR and PSD Approval requests.

Comment 6 – Engine Emissions Limits

Several comments relate to the emissions limitations for the engines powering the vessels that will support the construction, commissioning, and operations and maintenance of the turbines. A commenter stated that "Tier V emission standards should be" required for the engines powering the vessels. Related to this subject another commenter also stated that "the controls proposed are not enough to protect the local population from the impacts from the project."

MDE Response

In their application, US Wind, Inc. performed a detailed applicability determination of the regulatory requirements pertaining to the control of emissions for the proposed installations at the OCS.

As stated in the permit application, “pursuant to 40 CFR § 55.13(c), US Wind, Inc. is subject to the requirements listed in the new performance standards (NSPS) that apply to OCS sources in the same manner as in the corresponding onshore area (COA). Because the NSPS regulations of 40 C.F.R. Part 60 only apply to stationary sources and not to mobile sources supporting the construction, commissioning, and operations and maintenance of land based facilities, the Department generally agrees with US Wind, Inc.’s contention that only the OCS source emissions (i.e., the stationary source activities) are subject to NSPS.” However, the broad definition of OCS source contained in 40 C.F.R. § 55.2 provides that some marine vessel engines and non-road engines be subject to NSPS. Specifically, the definition includes vessels only when they are “permanently or temporarily attached to the seabed and erected thereon and used for the purpose of exploring, developing, or producing resources therefrom” or “physically attached to an OCS facility, in which case only the stationary sources aspects of the vessels will be regulated.” As such 40 C.F.R. Part 60, Subpart IIII would apply to both the marine engines while the vessels are regulated as OCS sources, and the permanently installed diesel generators on OSS Internal combustion engines (i.e., generating sets) located on an OSS.

The NSPS subpart IIII regulation allows non-emergency stationary CI internal combustion engines with a maximum engine power of 3,000 horsepower or less being installed on marine offshore installations to be certified to meet emission standards pursuant to either §60.4201(a) or (f). Section 60.4201(a) requires Tier 4 standards for new non-emergency engines under 40 C.F.R. Part 1039. Section 60.4201(f) requires applicable Tier standards from 40 C.F.R. Part 1042 depending on the engine size and model year. Based on recent LAER determinations for offshore wind projects discussed in Section 4 and a review of the relevant regulations, the lowest emitting diesel-fired electric generators are generators certified to the highest Tier standard in 40 Part 1039 (i.e., Tier 4).

As part of the PSD Approval, all vessels contracted by US Wind, Inc. must be equipped with marine engines (main and auxiliary) that meet the most stringent, applicable EPA Tier or MARPOL Annex VI emissions standard available and at a minimum, are engines certified to EPA Tier 2 emissions standards or MARPOL Annex VI emissions standards for foreign flagged vessels.

The permit to construct (PTC) also requires that all vessels contracted by US Wind, Inc. be equipped with marine engines (main and auxiliary) that meet the most stringent, applicable EPA Tier or MARPOL Annex VI emissions standard available at the time the marine vessel is hired for the specific work required in the timeframe required.

For the non-marine portable diesel generator engines and the permanent diesel generator engines, US Wind, Inc. is required to ensure that each of the engines is certified to meet the EPA Tier 4 emission standard from 40 C.F.R. § 1039, that applies to each engine. For the non-marine portable diesel generator engines used during C&C and O&M and for the permanent diesel generator engines on the four (4) OSS used during O&M, US Wind, Inc. shall ensure that each of the engines is certified to meet the EPA Tier 4 emission standard from 40 C.F.R. § 1039, that applies to each engine.

Finally, it is important to mention that at the current moment there are no Tier V standards. As such, the proposed permit and approval requires the most stringent tier standards for the engines powering the vessels when available.

Comment 7 – Air Quality Impacts

Commenters stated that "the approval of these air quality permits will allow US Wind to produce 41,673 tons of CO_2 per year during their first three years of construction and operations."

In addition, there was a concern about the proposed estimated NOx emissions during the construction and commissioning phases of the project, and their potential impacts on smog and acid rain, including the potential impact on water quality.

Another commenter stated that "dozens of boats that will be required for construction, and later maintenance and operations," henceforth potentially producing significant amounts of NOx emissions.

A commenter stated that Worcester County currently has no significant stationary emission sources in the area and that the construction process and daily operations will add NOx and fine particulate to the air.

MDE Response

MDE is aware of the estimated potential carbon dioxide (CO_2) and NOx emissions that will occur during the construction and commissioning phases of the project. The construction, commissioning, and operation and maintenance of the wind turbine generators (WTGs) and OSS will necessitate the use of marine vessels. In the United States, and throughout the world, offshore projects are built and maintained with the use of a maritime fleet, which at the present time still rely heavily on vessels that use fossil fuels to power propulsion engines. The maritime industry continues to build newer, more efficient vessels with engines that now produce lower emissions per heat input, and have also explored more innovative technologies including the use of hybrid models.

During its technical review, the Department reviewed the contents of the permit application as well as the applicable emissions standards and regulations for similar sources (vessels).

As a major source of NOx emissions in the Ozone Transport Region, major non-attainment New Source Review (NSR) requirements apply. NSR requires the lowest achievable emissions rate, or LAER. All contracted vessels must be equipped with marine engines (main and auxiliary) that meet the most stringent, applicable EPA Tier or MARPOL Annex VI emissions standard available and at a minimum, that the engines be certified to EPA Tier 2 emissions standards or MARPOL Annex VI emissions standards for foreign flagged vessels. These requirements ensure that NOx emissions from the associated vessels are maintained at the lowest possible level than can be achieved for this project.

For other pollutants, Prevention of Significant Deterioration (PSD) requirements apply. PSD review was required for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ as estimated emissions of these pollutants exceeded their respective significance thresholds for Worcester County, the corresponding onshore area. Potential estimated emissions of CO_2 did not exceed the CO_2 significance threshold of 75,000 tpy, so PSD review was not required for emissions of CO_2.

As part of the PSD Approval, US Wind, Inc. was required to implement best available control technology (BACT) as a control strategy for the applicable list of pollutants, including NO_2.

However, since LAER must be at least as stringent as BACT, the LAER strategy for NOx emissions was also considered BACT for NO_2 emissions from the OCS sources (vessels). For emissions of CO, PM_{10}, and $PM_{2.5}$ from OCS sources, the Department determined that BACT would be the same EPA Tier and MARPOL Annex VI emissions standard requirements for those pollutants from vessel engines and the use of good combustion practices. EPA Tier and MARPOL standards are the most stringent standards currently available ensuring that emissions of PSD pollutants are maintained as low as possible for this project.

Although the project did not trigger PSD review for CO_2 emissions, it is expected that implementation of the applicable LAER and BACT controls described in the foregoing paragraphs will have the co-benefits of helping to reduce CO_2 emissions. As stated earlier, US Wind, Inc. will be required to use the most stringent EPA Tier and MARPOL Annex VI emissions standard requirements for NOx, NO_2, CO, PM_{10}, and $PM_{2.5}$. In addition, US Wind, Inc. must also use good combustion practices which will increase the energy consumption efficiency of the vessels, resulting in lower emissions.

Under the PSD review, US Wind, Inc. was required to demonstrate that the proposed project's emissions will not cause or contribute to a violation of any National Ambient Air Quality Standard (NAAQS) in Worcester County. The NAAQS are concentrations in the ambient air that are established by EPA at levels intended to protect human health and welfare, with an adequate margin of safety. US Wind, Inc. was required to use dispersion models as a tool to project the ambient concentration that will result from the proposed OCS source emissions and to evaluate the impact of that source's emissions on the NAAQS.

The results of the NAAQS modeling analysis for each C&C and O&M scenario were presented in the PSD Factsheet, Table 5. As shown in Table 5, the project impacts, plus background, did not exceed or threaten to exceed the NAAQS.

US Wind, Inc. was also required to demonstrate compliance with PSD Class I areas. These are areas that are designated as requiring special protection from the effects of pollutants emitted by PSD sources due to the pristine quality of their natural resources. There is one Class I area within 300 km of the project centroid: Brigantine Wilderness area located in the Edwin B. Forsythe National Wildlife Refuge in New Jersey, approximately 126 kilometers north of the project. In addition, the northeast corner of the Shenandoah National Park, which is approximately 290 km away, was also included in the Class I area impact analysis upon the Department's request.

US Wind, Inc. conducted modeling to assess the impacts on visibility and nitrogen and sulfur deposition in both Class I areas, as well as the Assateague Island National Seashore Class II area, as per the request of the National Park Services (NPS). A procedure, as described in the Federal Land Manager's (FLM) Air Quality Related Work Group ("FLAG") guidance (2010), was used to determine the potential air quality related values (AQRV) impacts in the Class I area. Following the FLAG guidance, CALPUFF was used for the AQRV analysis.

US Wind, Inc. submitted a Class I AQRV modeling report to the FLM. After its review, the FLM determined that the proposed project is not anticipated to cause significant visibility impairment to Class I areas. However, the FLM requested that the Department include daily emissions limits to minimize the potential of visibility impairments as more wind turbine projects are built in the area. The daily emissions limits, based on the values used in the modeling analyses, were included in Part D of the PSD Approval.

Comment 8 – Potential Wake Effects

Comments related to the potential significant impact of the wake effect from the offshore wind turbines. A commenter asked, "if a permit can be denied only based on the potential impact of this effect." There have been some concerns on how the potential wake effect may also impact or increase ozone levels.

Another commenter shared concerns related to the potential impact that wind turbines could have due to the potential increase in the ozone layer in nearby urban areas.

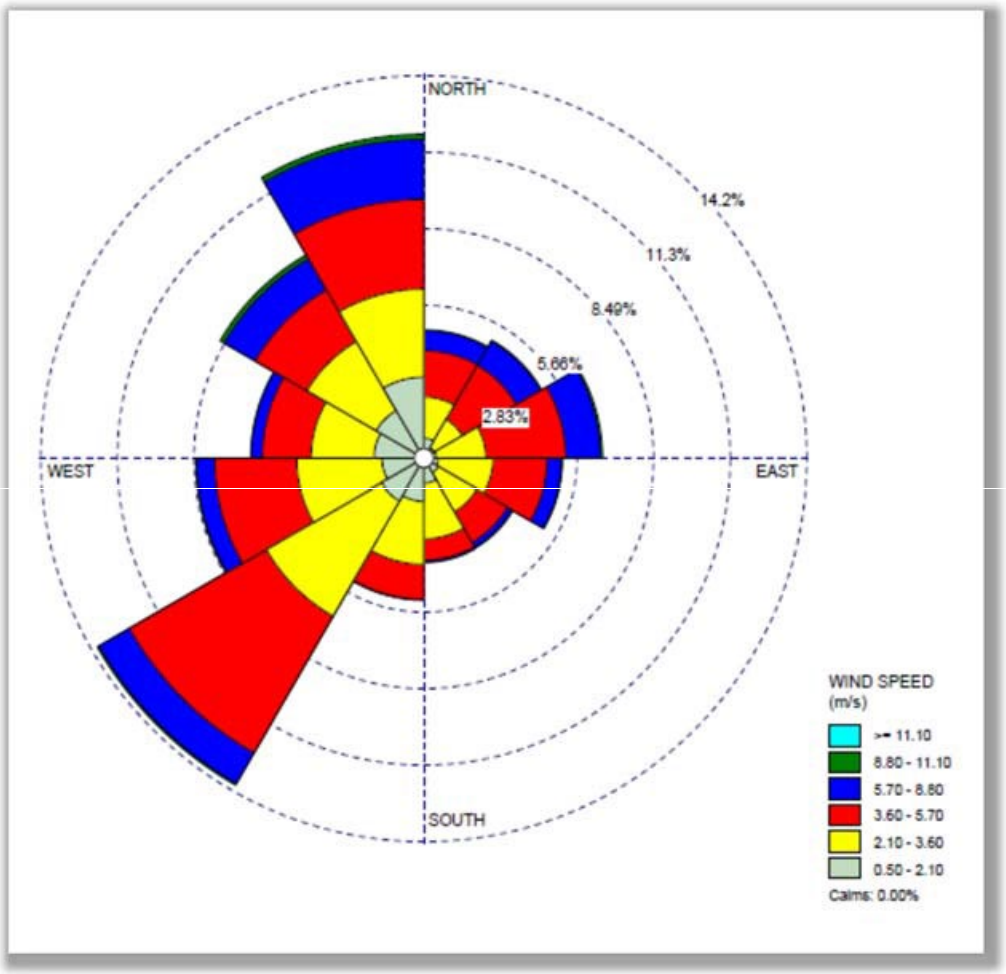
MDE Response

Wake effect" refers to the phenomenon downstream from a wind energy facility, which results from the changes in wind speed caused by the impact of turbines on each other. When wind passes through a turbine, the blades extract energy from the wind, which reduces the wind speed and changes its direction in the area immediately downstream of the turbine, creating a "wake" region characterized by reduced wind speed and turbulence.

Wind turbine wake effects would have minimal to no impact on the ozone (O_3) levels along Maryland's coastline, or near more local areas (i.e., Ocean City) and inland areas in nearby counties on the Eastern shore. The wind farm (turbines) will be operating at a distance of approximately 10.0 nautical miles (~18.5 km, 11.5 miles) offshore from the nearest shoreline.

Near Ocean City, the wind generally blows from the northwest toward the southeast or from the southwest toward the northeast. This is documented in the wind rose created using wind speed and direction collected at Ocean City Airport (taken from Appendix B – Meteorological Data Evaluation, US Wind – Maryland Offshore Wind Project Air Quality Modeling Protocol).

Observed Wind Data – Ocean City Airport



Since the wind near Ocean City is generally moving off-shore, and because the wake effect is felt in the same direction as the wind is blowing but after (i.e. behind) the wind turbine, the wake of the wind turbine generators would generally be moving toward the open ocean. Figure 1-2 in the permit application shows the location of the wind farm in relation to the coastline. Based on the prevailing wind, the wakes of the wind turbine generators will predominantly be on the east, or the northeast side of the wind farm on the open ocean side, not toward the coastline.

Additionally, for offshore wind development projects, the “wake effect” may be more of a consideration in the design of the offshore wind farm spacing, rather than the potential for onshore air quality impacts.

In terms of the design, the consideration of this effect provides some technical rationale to determine how far apart turbines are spaced. Individual turbine wind generators need to be spaced far away from each other, so that the impact of the wake effect that may be created by one turbine does not produce a negative effect on another. This is important to enhance the overall power production from the wind farm.

The U.S. EPA addressed this question as part of the comments received during the permitting process for a nearby offshore wind project, Coastal Virginia Offshore Wind Project (https://www.epa.gov/system/files/documents/2024-04/response-to-comments-for-cvow-c-ocs-air-permit-4-9-24.pdf, accessed May 19, 2025). In their response, the U.S. EPA concluded that reductions in wind speed (wake effect) are likely to be minimal and have little to no effect on onshore ozone concentrations. The Department reviewed the response cited here and found that the same conclusion applies to US Wind’s proposed project, as the design considerations and methodology used are similar to the Virginia project.

Furthermore, as part of the permit application US Wind performed air quality modeling for potential emissions of ozone. Ozone modeling is presented in Section 5.4 of the permit application. The results of the modeling for ozone were presented in Table 5.2. of the permit application. The Department reviewed the results presented by the company and found them to be acceptable. The results showed that there was no significant impact from the project on ground level ozone and demonstrated compliance with the National Ambient Air Quality Standard (NAAQS) for ozone.

Comment 9 – Green Energy Project

Commenters expressed their concern and stated that the proposed wind farm is not a green energy project.

MDE Response

MDE acknowledges the concern regarding how beneficial the proposed project will be towards the environment. Green energy is a concept that is defined differently when consulting different stakeholders, including both governmental and non-governmental organizations.

According to the U.S. Energy Information Administration, “renewable energy is energy from sources that are naturally replenishing but flow limited.” (U.S. Energy Information Administration, https://www.eia.gov/energyexplained/renewable-sources/, last accessed May 6, 2025). The major types of renewable energy sources are Biomass, Hydropower Geothermal Wind, and Solar. *Id*. The use of

wind energy represents only 9 percent of the entire renewable energy portfolios in 2023." *Id*. The agency also stated that "renewable energy can play an important role in U.S. energy security and in reducing greenhouse gas emissions." Id. According to the U.S. EPA, "green power is a subset of renewable energy. It represents those renewable energy resources and technologies that provide the greatest environmental benefit." (U.S. Environmental Protection Agency, https://www.epa.gov/green-power-markets/what-green-power, last accessed May 6, 2025) The U.S. EPA also stated "that within the U.S. voluntary market, green power is defined as electricity produced from solar, wind, geothermal, biogas, eligible biomass, and low-impact small hydroelectric sources. To qualify as green power, this renewable electricity must also go above and beyond what is otherwise required by mandate or requirement. In other words, green power is voluntary, or surplus to regulation." *Id*.

MDE recognizes that like any other renewable energy project, the equipment that will be used to construct, commission, and later operate and maintain the wind turbines will be provided by marine vessels that burn fossil fuel (mostly marine diesel engines). It is expected that this industry will eventually transition into more hybrid modalities in the future. However, the impact of the emissions from marine vessels used to support the Maryland Offshore Wind Project are significantly lower than emissions generated from traditional natural gas-fired or coal-fired power plants themselves, which also require periodic maintenance often supported by vehicles or locomotives producing additional supplemental emissions.

Comment 10 – Permit Application Review Process

Commenters stated that the Department has ignored the concerns of the citizens and has rushed to issue the air quality permit for the wind farm.

In addition, another commenter expressed their concern and asked if the staff involved with the review of this project "have any experience at all previously with evaluating wind turbine projects."

MDE Response

MDE acknowledges the concern regarding the permit review process for the first offshore wind project in Maryland. In accordance with 42 U.S.C. § 7475(c), permits for a major emitting facility must be granted or denied not later than one year after the date of filing of a complete application.

The Department received the air quality permit application from US Wind, Inc. on November 30, 2023 (electronically), and hardcopies received on December 7, 2023. A completeness review was performed and the application was deemed complete on January 4, 2024.

A notice was placed in the Worcester County Times on May 23, and 30, 2024 announcing a scheduled informational meeting to discuss the permit to construct application. The informational meeting was held on Thursday, June 13, 2024, at

the Ocean City Convention Center, Rooms 201 and 202, located at 4001 Coastal Highway, Ocean City, Maryland 21842. The Informational Meeting consisted of an open house format poster session that began at 5:30 p.m. to 7:00 p.m., followed by a question-and-answer session from 7:00 p.m. to 8:00 p.m.

After the public meeting, the Department commenced its detailed technical review. As part of this review process, the Department assembled a technical team of seven engineers and an air quality modeler with expertise in air quality permitting and modeling. The contents of the permit application were evaluated using an internal peer review process to perform a detailed review of emissions calculations, assumptions taken, proposed regulatory framework, applicable regulations, and air quality modeling files. The review included extensive collaboration with the Department's U.S. EPA Region 3 counterparts. This process culminated in the preparation of the necessary documentation for a tentative determination to issue the permit and approvals. A public hearing was held on Thursday, January 9, 2025, at Ocean City Convention Center, located at 4001 Coastal Highway, Ocean City, Maryland to provide interested parties an opportunity to comment on the Department's tentative determination and draft permit conditions, and/or to present other pertinent concerns about the proposed facility.

MDE maintains a dedicated staff with the technical background and expertise to administer the State's air quality permits program. The U.S. EPA has delegated authority to MDE to issue federal permits in the state of Maryland pursuant to the Clean Air Act. The program has issued numerous PSD and NSR approvals and air quality Permits to Construct for major sources of pollution in Maryland. Although the construction of an offshore wind farm presented a new and distinctive project in terms of energy production scope, the technical aspects of the air quality analysis were similar to a review of any other major source (e.g., power plant). In summary, the Department's technical team possesses the necessary transferable skills to conduct an assessment on the potential impacts originating from this project.

The Department disagrees with comments that consideration of the air quality permit for this project has been rushed. As stated in the permit application, the location of the proposed offshore wind lease area is the result of a multi-year effort by state and federal regulatory agencies to identify OCS areas suitable for offshore renewable energy development." MDE is well aware that US Wind, Inc. has engaged now for nearly a decade in the project planning, including an extensive review of site characterization and an assessment of potential impacts to the proposed site area. US Wind, Inc. first contacted MDE in 2015 during the early stages to seek and obtain approval for an air quality permit authorizing the installation of a diesel fired electrical generator for a meteorological tower to gather site specific data.

Throughout the years, US Wind, Inc. has engaged with a number of federal and state agencies to comply with a myriad of permitting and evaluation requirements. US Wind, Inc. has also conducted numerous studies, including environmental, economic, cultural, and visual resources, and use conflicts. As stated in the permit

application, as part of the project, US Wind, Inc. "conducted project screening and siting evaluations and a review of potential impact producing factors on various resources, including physical, biological, socioeconomic and others." These evaluations are presented in the US Wind Construction and Operations Plan (COP). US Wind's plans and permit applications have been extensively evaluated by other State and federal agencies and subject to public scrutiny and comment over a significant period of time. As such, the process has taken more than one-year (beyond the timeframe contemplated in 42 U.S.C. § 7475(c)) and was not rushed. Also, see MDE Response to Comment 11, below.

Comment 11 – Permit Issuance Timeline

A commenter stated that MDE failed to act within the Clean Air Act's statutory deadline to either grant or deny the permit within one year after the application was deemed complete and therefore is prohibited from granting the permit. The commenter stated that the current permit application was deemed complete by the Department more than one year ago without the permit being issued. As such, now that one more year has passed, the current permit application is now time barred.

MDE Response

The Department acknowledges the concern regarding the time that has elapsed in the permitting process. The Department also acknowledges that more than one year has passed since the permit application was deemed complete, and the referenced statutory requirement of 42 U.S.C. § 7475(c) expressed by the commenter.

During the past year, and since the permit application was deemed administratively complete on January 4, 2024, the Department actively engaged with US Wind, Inc., as well as numerous internal and external stakeholders with the necessary expertise to assist in the review. The nature of the project required public review, which presented the challenge to accomplish two different public involvement milestones (a public information meeting, and a public hearing). The timing and communication of the informational meeting and public hearing must meet both Maryland and federal requirements including adequate public notice and prescribed timelines for opportunities for the public to comment.

Although the project was complex and included three separate determinations and permit actions (Permit to Construct, New Source Review Approval, and Prevention of Significant Deterioration Approval), the Department was able to propose the draft documents for EPA review and public comment by December 5, 2024, approximately 12 months from the date the application was determined to be administratively complete. The public comment period was open through March 17, 2025 following a one-time 60-day extension requested by the public and required by Maryland law.

Although the Department, as the delegated permitting authority, had a statutory duty to either grant or deny the permit application within one calendar year of its completeness determination, the Clean Air Act does not prohibit MDE from

finalizing its determination now. The Clean Air Act does not expressly prohibit the issuance of a permit pursuant to 42 U.S.C. § 7475 solely because the deadline in that section was missed. To the contrary, section 304 of the Act recognizes causes of action against the EPA (or its delegated permitting authority) for failure to act by a statutorily-imposed deadline, authorizing a cause of action for an agency's failure to perform a nondiscretionary duty or to compel unreasonably delayed. 42 U.S.C. § 7604(a). Under prior deadline lawsuits, the courts have ordered permitting authorities to act where a deadline has been missed. See e.g. *Sierra Club v. EPA*, 762 F.3d 971, 978 (9th Cir. 2014). An alternative reading consistent with the commentor's position would not make sense, as the permitting authority could not be forced to act before the statutory deadline, but would be prohibited from acting anytime thereafter—essentially forcing an applicant into a never ending cycle of permit submissions that an agency could avoid acting on.

Following the close of the public comment period, the Department has reviewed all public comments and with this Response to Comments document is now prepared to issue a final determination. By that action, the Department is remedying its failure to timely act and, in any case, has not unreasonably delayed the final determination.

Comment 12 – Marine Vessel Fleet

A commenter expressed concern and stated US Wind, Inc. has "significantly underestimated the marine vessel fleet that will be required to maintain the Maryland Offshore Wind Project 114 turbines by orders of magnitude." In particular, this concern relates to the use of vessels for crew transfer, turbine maintenance, and system monitoring.

MDE Response

The Department performed a technical review of the contents that were provided in the permit application. US Wind, Inc. submitted detailed information about the most representative vessels that would be needed to support the various phases of the project. In addition, the permit application also contained appropriate operational assumptions. These assumptions included but were not limited to trip estimates, hours of operations, average speeds, engine size, and other pertinent information to support the detailed emissions calculations. US Wind, Inc. based their vessel types, numbers, and other vessel inputs in part on the tool provided by the Bureau of Ocean Energy Management (BOEM) and recently approved OCS air permits.

The Department recognizes that during the construction and operations phases, US Wind, Inc. may be required to adjust the vessel operations to reflect conditions or operational scenarios in the future. Recognizing the variability that future operational scenarios may present, the permit approvals provide for monitoring, record keeping and reporting conditions to track vessel information and associated emissions to show compliance with emissions limits. To accommodate for the mentioned potential future variabilities, the permit contains the following conditions to account for future changes to the project emissions, based on changes to the

project vessels and their operation (Permit To Construct, Part E – Construction Conditions):

(1) Prior to the C&C Start Date, the Permittee shall provide the Department an initial report, for review and approval, that defines each vessel contracted, each anticipated representative vessel, and each marine and non-marine engine to be used during C&C and O&M of the Maryland Offshore Wind Project. The report shall include, at a minimum, the following information:

(a) All the information required by Part H(7)(a), (b), (c), and (d) of this permit;
(b) Updated Potential to Emit estimates and calculations for NOx, CO, PM-10, PM-2.5, VOC, SO2, lead (Pb) and GHG (as CO2e) as per the emission estimation methods as required in Part G of this permit.

US Wind, Inc. has provided the following additional response addressing these concerns:

In US Wind, Inc.'s point of view the "commenter assumes one round trip by a crew transfer vessel (CTV) per turbine and uses the flawed assumption to suggest that US Wind underestimates vessel trips during the operations and maintenance phase of the offshore wind project. One CTV can bring 4 to 8 teams of maintenance personnel on board, allowing the CTV to visit 4 to 8 turbines per trip. Even if CTVs could bring only 2 teams of technicians, US Wind's number of necessary CTVs (4) is a conservative estimate."

US Wind, Inc. also states that the commenter cited and relied on the information that was presented in a ten-year-old paper that assumes that any individual "failure" at a wind turbine requires at least one dedicated repair visit. However, US Wind, Inc. states that currently "minor electrical system repairs may be addressed from shore via the Supervisory Control and Data Acquisition (SCADA) system or could be attended to during a preventative maintenance visit."

US Wind, Inc. states that "the commenter also suggested that emissions to transport large cranes or other equipment are not included in US Wind's estimates." In response, US Wind, Inc. states that "large cranes would be needed in only very limited circumstances because technicians can access nacelles internally via an elevator in the tower." US Wind, Inc. included unexpected annual major maintenance as illustrated in Table A-39, from US Wind's application, in their comment letter with multiple trips per year of repair vessels in addition to CTVs.

The Department finds that the assumptions taken by US Wind, Inc. to prepare the emissions estimates are appropriate. As mentioned earlier, the proposed permit approvals provide for monitoring, record keeping and reporting conditions to track emissions, sufficient to show compliance with the emissions limits.

Comment 13 – Jones Act Compliance

"US Wind's application fails to address a safe water vessel to bring the permit and the project into compliance with the Jones Act. From US Wind's own Mariner's page, a documented vessel DMMSI Number 993672393, a 419-foot vessel, safe water vessel, that has been anchored off the end of the Delaware Bay shipping channel, and at the Maryland-Delaware line on the edge of the US Wind OCS-A 0490 lease area, the Delaware-Ocean City, Maryland line since at least December of 2024…US Wind has not documented any indications that they have accounted for a safe water vessel classification, nor the pollution that the vessel emits over the course of this project."

MDE Response

Although the statements in this comment are outside the purview of air quality approval and air permitting, the Department asked US Wind, Inc. to clarify the specific requirements for the vessel operations for the project. US Wind, Inc. has provided the following response:

US Wind, Inc. will be required to comply with the Jones Act as stated in US Wind's approved Construction and Operations Plan (Volume I Section 4.0).

The referenced Section 4.0, states that "the vessels employed on the Project will be required to comply with applicable USCG and Jones Act regulations for conducting operations in US waters. All foreign flag vessels employed on the Project will, in addition to USCG and Jones Act requirements, be required to meet International Maritime Organization (IMO) and International Marine Contractors Association (IMCA) requirements."

The air quality permit considers project vessel emissions from the Construction and Commissioning Start Date through the Operations and Maintenance Phase. The operation of the referenced 419-foot vessel occurred before the Construction and Commissioning Start Date.

Comment 14 – Severe Weather

A commenter stated that "wind turbines have never been in existence in a hurricane prone area here on the east coast of Maryland." The commenter further questioned, "how will these wind turbines be able to stand up to this type of destructive weather?"

Another commenter also voiced concern of the possibility of tornados in the areas and how it may affect the offshore wind farm. The commenter stated that "wind turbines do not stand up well to tornado-force winds, the speed of which can be less than hurricane winds and are certainly of less duration."

MDE Response

Although the statements in this comment are outside the purview of air quality approvals and air quality permitting, the MDE asked US Wind, Inc. to address these concerns. US Wind, Inc. states that in their Construction and Operations

Plan in Volume II, Section 2.5.2 Extreme Wind Conditions describes past and forecast extreme wind conditions, including hurricane conditions, in the Lease area. Offshore wind turbines are rated for extreme wind speeds and are being installed on the east coast of the Unites States. While outside of the Department's area of expertise and statutory decision-making responsibilities, MDE finds this response reasonable.

Furthermore, in Volume I, Section 2.3. of the Final Environmental Impact Statement (FEIS) that was prepared by BOEM as part of the supporting documents for the US Wind's project (https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis, accessed May 15, 2025), there is a discussion of "Severe weather and natural events," including how they are considered in the design of the components of wind farms and were considered in US Wind Inc.'s design. As stated in this section, severe weather does periodically occur in the vicinity of the wind development area and engineering design criteria have been established for wind farm components, such as wind turbine generators, to account for the stresses of severe weather." According to the FEIS, US Wind, Inc. has followed those design criteria.

Another relevant publication found by the Department relates to the Block Island Wind Farm. This project is the only fully constructed offshore wind farm on the Atlantic Coast at the present time. The only information about the wind farm as it related to severe weather was provided in a blog entitled, "How Do Wind Turbines Survive Severe Weather and Storms?" (https://www.energy.gov/eere/articles/how-do-wind-turbines-survive-severe-weather-and-storms?nrg_redirect=465731#:~:text=Block%20Island's%20First%20Test,Island%20after%20the%20winds%20diminished, accessed May 15, 2025).

According to the blog article, the wind farm withstood the winter storm Stella in March 2017 without serious damage. It was stated that the "wind farm sustained wind speeds higher than 70 mph during the automatic shutdown and successfully powered back up to serve Block Island after the winds diminished."

Based on the information that was provided by US Wind, Inc. as well as the information that has been published on this topic, it appears that offshore wind farms would be designed to withstand a variety of weather conditions. As stated earlier, while outside of the Department's area of expertise and statutory decision-making responsibilities, MDE finds that US Wind, Inc. considered severe weather conditions as part of the design of their wind farm components and operations.

Comment 15 – Fishery Resources, Biodiversity, Ecosystems, and Marine Environments

A commenter stated that one hundred percent of his fishery is in and around the wind-leased area. The commenter further stated that this project could greatly negatively affect its fishing business.

Another commenter stated that “that insufficient research and data collection are being used to justify moving forward with a project that will have long-range negative impacts of the environment, marine life, commercial fishing, and the hospitality industry, and an enormous cost to Maryland’s rate payers and taxpayers at a time when Maryland faces a budget crisis.”

MDE Response

These comments are also outside the purview of air quality approval and air quality permitting. However, the Department asked US Wind, Inc. to clarify how the project may negatively affect nearby fishery resources, biodiversity, ecosystems, and marine environments, including economic impacts.

US Wind, Inc. states that the offshore wind project has been extensively reviewed over several years for potential environmental impacts by the Bureau of Ocean Energy Management and numerous other agencies including the National Marine Fisheries Service, resulting in the Federal Environmental Impact Statement (FEIS) and Record of Decision (ROD) in 2024.

US Wind, Inc. also states that the FEIS and ROD found that the project would not destroy the environment, would not have irreversible long-term impacts on environmental and socioeconomic resources, and would have multiple beneficial effects. The direct jobs in Maryland and additional electricity added to the grid in a time of extremely high demand would benefit the state. Ratepayer impacts were extensively reviewed by the Maryland Public Service Commission and found to be under a defined ratepayer cap, as required.

Studies at offshore windfarms constructed off the U.S. east coast are underway, and the first before-after-control-impact study at the Block Island Wind Farm off Rhode Island demonstrates a reef effect and increased fish around the installed turbines. BOEM’s FEIS found the potential impacts to fisheries from US Wind’s project could be minor to major, with minor beneficial effects for for-hire recreational fishermen, and therefore potential major impacts to fisheries are required to be mitigated. The Maryland Department of Natural Resources and US Wind signed a Memorandum of Understanding on May 13, 2025 to define mitigation for commercial and for-hire recreational fishermen, above and beyond what is required in US Wind’s federal approvals.

In should be noted that the FEIS also found that the “no action” alternative impacts to fisheries, where US Wind’s project is not built, were also minor to major, with moderate impacts (not benefits) to for-hire recreational fisheries. This conclusion is based on the continued regional trend of reductions in fisheries in the project’s offshore federal lease area due to ongoing human activities as well as the effects of climate change through warming waters, changes in fish distribution and abundance, and ocean acidification.

Comment 16 – Public Safety Zone

A commenter stated that "MDE should ensure that US Wind establishes an enforceable public safety zone within the project lease area in accordance with 40 CFR §55.8 and §55.13 and 33 CFR §147. US Wind's modeling analysis supporting its proposed emission limits utilized 500-meter exclusion zones for its construction & commissioning (CC) activities. This 500-m safety exclusion zone was integral in establishing the project's working ambient air boundary and should preclude public access. Without formally establishing these 500-meter safety exclusion zones utilized in US Wind's modeling analysis, there is no mechanism to ensure the National Ambient Air Quality Standards and PSD will be protected during the CC phase of this project. MDE should include a requirement in the final PSD approval that requires US Wind to establish an enforceable 500-meter exclusion zone to prevent incursion into the exclusion zone by unauthorized entities."

MDE Response

MDE acknowledges the concern regarding the importance of establishing an enforceable public safety zone within the project lease area in accordance with 40 CFR §55.8 and §55.13 and 33 CFR §147. These regulations, although related, each contain specific purposes. For example, 33 C.F.R. § 147 addresses safety zones for OCS sources; while 40 C.F.R. § 55.8 addresses reporting requirements; and 40 C.F.R. § 55.13 addresses federal requirements for OCS sources.

In Section 5.2.5, of the Air Quality Modeling Analysis as part of the permit application, US Wind, Inc. referred to the 500-meter exclusion zone. US Wind, Inc. stated that, "the modeled receptors varied based on the type of construction and O&M activity." US Wind, Inc. further stated that, "during construction, it is assumed that a 500-meter exclusion zone will be established to keep the public away from the immediate area of the activity." US Wind, Inc. provided the details of the safety zone in the "Project's Navigation Safety Risk Assessment (US Wind, May, 2022) that has been provided to the BOEM as part of the Construction and Operations Plan (COP)." Furthermore, US Wind, Inc. stated that "the receptor field was placed adjacent to the activity in areas where the public could have access. For the purposes of modeling, it is assumed that the construction vessels are located at the center of the receptor grid and the exclusion zone is 500 m in all directions."

US Wind, Inc. also referred to the 500-meter exclusion zone in Section 4.4, of the Air Quality Modeling Protocol that was prepared as part of the permit application.

The Department reviewed the comment opinion pertaining to the need for a condition in the final PSD approval that will require US Wind, Inc. to establish an enforceable 500-meter exclusion zone to prevent incursion into the exclusion zone by unauthorized entities. The request is appropriate and as such, a condition will be included in the final PSD approval as well as in the permit to construct that will require US Wind, Inc. and/or the U.S. Coast Guard to establish an enforceable 500-meter exclusion/safety zone to prevent incursion into the exclusion/safety zone by unauthorized entities. The condition will be included as part of the reporting requirements in each of the mentioned documents.

The proposed condition will read as follows: “The Permittee shall provide a copy of the Permittee’s request for establishment of temporary safety zones and the temporary final rule for the 500-meter temporary safety zones established by the U.S. Coast Guard. In the event the U.S. Coast Guard does not establish a 500-meter safety zone, the Permittee shall establish an enforceable 500-meter exclusion zone to prevent incursion by unauthorized entities. The Permittee and/or the U.S. Coast Guard will monitor temporary exclusion/safety zones to prevent incursion into the exclusion/safety zones by unauthorized entities and report any incursion to the Department that results in an emissions exceedance as specified in Part H(9) of the permit to construct. [Ref: 40 C.F.R. § 55.8, 40 C.F.R. § 55.13, and 33 C.F.R. § 147].”