New Jersey Department of Environmental Protection

Division of Land Resource Protection

Ocean Wind 1 State Permit Applications & Federal Consistency Certification

RESPONSE TO COMMENTS

File No. 0000-21-0008.1 CDT210001 FEDERAL CONSISTENCY CERTIFICATION

0000-21-0008.2 LUP220001 CAFRA IP

0000-21-0008.2 LUP230001 WATERFRONT DEVELOPMENT INDIVIDUAL IN-WATER PERMIT

0000-21-0008.2 LUP230001 COASTAL WETLANDS PERMIT

0000-21-0008.2 LUP220001 FRESHWATER WETLANDS INDIVIDUAL PERMIT

0000-21-0008.2 LUP220002 FLOOD HAZARD AREA INDIVIDUAL PERMIT (WITHDRAWN)

0000-21-0008.2 LUP220004 FLOOD HAZARD AREA VERIFICATION (ISSUED)

Written comments received by the Division of Land Resource Protection ("Division") during the initial application review period for the CAFRA Individual Permit, Waterfront Development Individual In-Water Permit, Coastal Wetlands Permit, and Freshwater Wetlands Individual Permit Applications and Federal Consistency Certification Application indicated that there was substantial public interest in this project. The Coastal Zone Management Rules, N.J.A.C. 7:7-1.1 et seq., ("CZM Rules"), provide for an option for a public hearing on an application for proposed project authorization under a CAFRA Individual Permit. Further, the CZM Rules provide for an option for a fact-finding meeting on a Waterfront Development or Coastal Wetland Individual Permit application if the Department of Environmental Protection ("Department") determines that, based on public comment received and/or a review of the scope and/or environmental impact of the proposed project, additional information is necessary to assist the Department in its evaluation of the potential impacts, and that this information can only be obtained through a fact-finding meeting. Lastly, the Freshwater Wetlands Protection Act Rules, N.J.A.C. 7:7A- 1.1 et seq., ("FWW Rules") and Flood Hazard Area Control Act Rules, N.J.A.C. 7:13-1.1 et seq., ("FHA Rules"), also provide for a fact-finding meeting if the Department determines that, based on public comment received and/or a review of the scope and/or environmental impact of the proposed project, additional information is necessary to assist the Department in its evaluation of the potential impacts, and that this information can only be obtained through a fact-finding meeting.

Due to the expressed public interest, three (3) public hearings were held. The first two (2) hearings were held virtually on December 7th and 12th, 2022 via Zoom. The third and final public hearing was held in-person on December 15, 2022 at Hammonton High School located in Hammonton, New Jersey. Numerous comments were received from the public during the hearings as well as during the public comment period, either via email to the Division or through the Department's Offshore Wind webpage, https://dep.nj.gov/offshorewind/. Some comments were pertinent to the pending applications noted above, while others were not subject to the Division's jurisdiction under the Coastal Zone Management Rules, N.J.A.C. 7:7-1.1 et seq., the Freshwater Wetlands Protection Act Rules, N.J.A.C. 7:7A-1.1 et seq., and/or the Flood Hazard Area Control Act Rules, N.J.A.C. 7:13-1.1 et seq.

It is important to make a distinction between the portion of the project that is subject to the Federal Consistency review and the State permit application review. New Jersey's coastal waters are any tidal waters of the State of New Jersey extending from the mean high-water line out to the three-geographical-mile limit of the New Jersey territorial sea, and elsewhere to the interstate boundaries of New York, Delaware, and the Commonwealth of Pennsylvania. The Offshore Project components in Federal waters (the "Federal project") consist of the installation of the 98 Wind Turbine Generators

("WTGs") and their foundations, inter-array cables, up to three offshore substations and their foundations, scour protection for foundations and the sections of the three transmission cables (located within two export cable corridors) that are located beyond the three-geographical mile State jurisdictional limit and therefore not subject to CAFRA or Waterfront Development jurisdiction.

The components of the project subject to State permit application review (the "State project") include an electric transmission cable starting at the B.L. England Generating Station in Upper Township, Cape May County, two electric transmission cables starting at the former Oyster Creek Nuclear Power Plant, and all said cables then extending east to the three-geographical-mile limit of the New Jersey territorial sea. In addition, two onshore substations are proposed at the B.L. England Generating Station and the Oyster Creek Nuclear Power Plant, respectively. Also proposed within the State of New Jersey jurisdiction is the proposed potential maintenance dredging of Oyster Creek Federal Channel to a depth of -10' MLLW for safe passage of construction vessels in Barnegat Bay.

To distinguish between the portions of the project, the components subject to State jurisdiction and permitting is referred to herein as the State project, and the portion of the project beyond the three-geographical-mile limit of the State of New Jersey, as discussed above, is referred to herein as the Offshore project.

The Division received over 100 comments during review of these applications, including comments from individual citizens, attorneys and environmental groups. Overall, the comments discussed similar concerns. The received public comments were provided to Ocean Wind LLC ("Applicant") via email on January 19, 2023 to assist in providing responses to the received public comments for the Division's file. The Division has grouped the concerns outlined in the received public comments into the below topics with corresponding responses.

This Comment Response document applies to both the Federal Consistency Certification request and the State permit application, because the majority of submitted comments addressed both elements. The Division considered all comments in its review of both the Federal Consistency Certification and the State permit applications, regardless of which application the comment directly referenced. The below comment responses are organized by topic and the actual comment language has been paraphrased for ease of review.

General Objections to Offshore Wind projects:

The Division received approximately 20 comments containing general objections to offshore wind projects and/or to the proposed Ocean Wind 1 project specifically. Those comments specifically identifying a topic or identifying a non-compliance issue with the CZM Rules, FWW Rules and/or FHA Rules have been included in the below discussion under the applicable topic(s).

General Support for Offshore Wind projects:

The Division received approximately 41 comments containing general support for offshore wind projects and/or for the proposed Ocean Wind 1 project specifically. Those comments specifically identifying a topic under the CZM Rules, FWW Rules and/or FHA Rules have been included in the below discussion under the applicable topic(s).

Applications are incomplete and deficient

Comment

The applications as presented on the Department's website are incomplete and deficient and do not meet Department standards for approval. There are numerous deficiencies in this application for the

State permit application for the Ocean Wind 1 offshore wind farm that prevent complete and adequate review.

Response

The Division's review of both the State permit application and Federal Consistency Certification application included extensive review of the information submitted, extensive internal coordination and review by numerous Department programs, and detailed communications with the Applicant regarding additional information needed. Requests to the Applicant for administrative information to deem the State permit application complete were made via correspondence dated August 24, 2022 as well as email on September 19, 2022. The requested administrative information was provided to the Division and the State permit application declared administrative complete effective September 21, 2022. Subsequently, the Division also issued requests for technical information via correspondence dated October 19, 2022 and December 28, 2022. Furthermore, additional technical information was provided to the Division to clarify the proposed environmental impacts of the State project throughout the State permit application review process.

For the Federal Consistency Certification review process for the Offshore project, information was continuously exchanged between the Department and Applicant through participation in bi-weekly project meetings, as well as in direct communications between the Applicant and Department programs such as the Marine Resources Administration, State Historic Preservation Office and Office of Coastal Engineering. Those communications informed the review comments provided to the Division regarding the Offshore project's consistency with the applicable Coastal Zone Management Rules.

Throughout the review process, project information, including supplemental submittals, was continuously available via the Open Public Records Act ("OPRA") process from the Department, from the Township municipal clerks' offices in the municipalities where the project is sited, and posted on the DEP's Offshore Wind webpage for public viewing. As a result of the extensive communications and submission of additional information, the Division was able to complete its review of the applications and make a determination of consistency under the Federal Consistency Certification request, as well as issue a State permit which is conditionally compliant with the applicable CZM rules, FWW rules and FHA rules. The analysis of how the Division reached those conclusions is contained within the environmental reports prepared for each respective application.

Coastal Zone Management Listed Activity

Comment

Offshore wind projects are not currently a listed activity under New Jersey's Coastal Zone Management Program ("NJCMP") but should be in the future.

Response

The Coastal Zone Management Act ("CZMA") federal consistency provision is a cornerstone of the CZMA program. Federal consistency provides states with an important tool to facilitate cooperation and coordination with federal agencies in decisions regarding the management and use of important coastal resources. Under the CZMA, activities by federal agencies and non-federal applicants for federal authorizations that have effects on these coastal resources must be consistent to the maximum extent practicable with the federally approved enforceable policies of a state's Coastal Management Program.

More specifically, a non-federal entity applying to the federal government for a required permit or license or any other type of authorization is subject to the requirements of the CZMA §

307(c)(3)(A)(16 U.S.C. § 1456(c)(3)(A)) and 15 CFR part 930, subparts A, B and D. Offshore wind development projects located in federal waters fall within this category of federal action. Therefore, the New Jersey Coastal Management Program (NJCMP) can review such development for consistency with its enforceable policies, where:

1. The activity is listed by the NJCMP and located within a geographic location (GLD);
2. The NJCMP requests to review the activity as an unlisted activity and is granted review authority by NOAA; or
3. The non-federal entity voluntarily submits a consistency certification to the NJCMP.

The NJCMP has not listed federal activities by BOEM within federal waters. Therefore, any federal activity that the State intends to review under the CZMA that is located within federal waters is considered an unlisted activity subject to process set forth at 15 CFR 930.54. However, if the State requests and is granted review authority or the non-federal entity voluntarily submits a consistency certification to the NJCMP, the State has the authority to review the activity.

Governor Murphy has established the goal of 100% renewable energy by 2050, which includes the development of 11,000MW of offshore wind by 2040. To meet the Governor's offshore wind energy goals, the Department has been working closely with the United States Department of the Interior's Bureau of Ocean Energy Management (BOEM), the agency responsible for permitting offshore wind energy development, to ensure consistency with the State's coastal resource protection policies. As New Jersey is an affected state, BOEM has designated NJDEP as a cooperating agency with respect to Ocean Wind LLC's environmental review process, which provided the Department advanced access to the draft Construction and Operation Plan ("COP") and Draft Environmental Impact Statement ("DEIS").

Additionally, all three developers currently proposing offshore wind energy projects in federal waters off New Jersey's coast have agreed to voluntarily submit consistency certifications to the Department as part of the federal permitting process, thereby subjecting the proposed offshore wind energy developments to review under the federal consistency provision of the CZMA. These agreements will ensure the NJCMP's enforceable policies are fully considered without the need for changes to the NJCMP's federal consistency listings and development of a Geographic Location Description ("GLD").

The Department could consider development of a GLD for future projects if it determines such action is necessary.

Property Rights:

Comment

Governor Murphy took away towns' constitutional rights. The applicant lacks full property rights and legal title for lands over which the project will traverse. While the project seeks to acquire such property rights from both Ocean City and Cape May County, the status remains uncertain and in dispute.

Response

This comment pertains to another State agency's action and is not within the Department's jurisdiction. Because the comment does not pertain to the Federal Consistency Certification application or State permit application, the Division acknowledges the comment but offers no further response other than the information presented below regarding information on the Applicant's compliance with N.J.S.A. 48:3-87.1(f)(2).

N.J.S.A. 48:3-87.1(f)(2) grants the New Jersey Board of Public Utilities ("BPU") the authority to make a determination on a petition from a qualified offshore wind project "seeking authority to obtain the easement, right-of way, or other real property interest." In accordance with this statute, amended on July 22, 2021, the Applicant, on February 2, 2022, filed a petition with BPU seeking the BPU's determination that certain easements across Green Acres-restricted properties owned by Ocean City, and that certain municipal consents needed for particular environmental permits in or with respect to Ocean City, are reasonably necessary for the construction of the Ocean Wind 1 offshore wind farm. The BPU approved this petition via Order, dated September 28, 2022 and effective on October 5, 2022, and confirmed BPU's determination that the easements and consents sought under the Applicant's petition are reasonably necessary for the construction and operation of the Ocean Wind 1 offshore wind farm project.

Additionally, a May 20, 2022 petition was filed with the BPU that sought the BPU's determination that certain easements across properties owned by the County of Cape May and certain consents needed from the County for certain environmental permits in and with respect to the County are reasonably necessary for the construction and/or operation of the Ocean Wind 1 offshore wind project. On February 17, 2023, the BPU granted the Applicant's May 20, 2022 petition which allows the Applicant to obtain easements over Cape May County property and obtain permits for construction on Cape May County property without the County's consents and approvals.

Views/Viewshed:

Comment

Construction of the offshore wind project will impact existing views of the ocean.

Response

The Scenic Resources and Design rule at N.J.A.C. 7:7-16.10(c) discourages new coastal development that is not visually compatible with existing scenic resources in terms of large-scale elements of building and site design. The rule, as discussed at N.J.A.C. 7:7-16.10(d), further clarifies that wind turbines are not subject to the setback requirements and open view corridor restrictions of this rule. Discouraged coastal development, as defined in the Coastal Zone Management Rules at N.J.A.C. 7:7-1.5, allows for uses that the Department considers to be in the public interest provided mitigating or compensating measures can be taken so that there is no net gain in quality and quantity of the coastal resource of concern. As discussed in the environmental reports accompanying the Federal Consistency Certification and State permit application, the construction of the Ocean Wind 1 offshore wind farm and associated infrastructure is in the public interest as the development will provide renewable, clean energy to New Jersey residents, will help negate climate change and its adverse effects on the coastal environment, such as sea level rise, and will aid in achieving New Jersey's established clean energy goals.

In clear weather, the WTGs and Offshore Substations ("OSSs") would be visible from the coastline. Nonetheless, the DEIS states that visitors will continue to be able to enjoy activities that rely on coastal and ocean environments, scenic qualities, natural resources, and establishments centered around coastal recreation and tourism. The DEIS concludes that seaside locations could experience some reduced recreational and tourism activity, but the visible presence of WTGs and OSSs would be unlikely to affect shore-based or marine recreation and tourism in the geographic analysis area as a whole.

As proposed, the State and Federal projects have been designed to minimize visual impacts to the maximum extent feasible. While there are no other options than siting of the Applicant's offshore wind farm within their established BOEM lease area, in order to minimize visual impacts, the Federal project's layout was adjusted to align turbines at the eastern portion of the lease area, so that the closest turbines are at least 15 miles from shore. To minimize visibility of the offshore wind farm further, the WTGs would be a tubular design and would be painted white or light gray to help reduce potential visibility against the horizon. Additionally, to resolve the visual and cumulative effects from visibility of the WTGs to 17

New Jersey historic properties where ocean views are character-defining features that contribute to their National Register of Historic Places ("NRHP") eligibly, BOEM is proposing the development and execution of a Memorandum of Agreement in accordance with 36 CFR § 800.6(c) to memorialize the steps BOEM will take in conjunction with consulting parties to avoid, minimize, and mitigate the project's adverse effects. Execution of the Memorandum of Agreement will demonstrate BOEM's compliance with Section 106 of the National Historic Preservation Act.

As an alternative to permanent lighting, the Applicant will install Aircraft Detection Lighting Systems ("ADLS") on WTGs to minimize visibility of the structures from all identified properties within the preliminary Area of Potential Effects ("APE"). ADLS activates the hazard lighting system in response to detection of nearby aircraft. The synchronized flashing of the navigational lights occurs only when aircraft are present, resulting in shorter-duration night sky impacts as compared to standard continuous, medium-intensity red strobe Federal Aviation Administration ("FAA") warning system.

The DEIS states that beyond the adjusted project layout within the Applicant's established BOEM lease area to provide a minimum 15-mile distance to land, the implementation of ADLS, and the painting of the WTGs in colors white or light gray, there are no other measures to mitigate impacts on scenic and visual resources, all of which are proposed measures to be implemented. Additional mitigating measures and compensation for visual impacts will be outlined in the Memorandum of Agreement in development by BOEM and consulting parties to satisfy compliance with Section 106 of the National Historic Preservation Act. Furthermore, as discussed in detail above, the WTGs meet the requirements of the Scenic Resources and Design rule.

Impacts to fish, shellfish, migratory birds, marine life

Comment

The offshore wind project will result in adverse impacts to fish, shellfish, migratory birds, and marine life.

Response

State Project

Fish and Shellfish

Information provided in the State permit application and detailed in the Division's report accompanying the State permit indicate that the selected electric transmission cable route within Barnegat Bay has been designed to avoid areas mapped as shellfish habitat to the maximum extent practicable while maintaining the ability to successfully install the cables with minimum impact to the surrounding environment. Additionally, the electrical transmission cable route will avoid impacting aquaculture lease areas. The installation of the electric transmission cables will be accomplished mainly through the use of a tracked self-propelled or towed jetting tool (jet sled or jet plow) with the exception of possible open-cut/trenching off the western shoreline of IBSP and the Holtec Landfall location as defined in the State permit's accompanying environmental report. The jetting tool will fluidize sediment along the intended cable route and allow the cable to sink into the fluidized trench under its own weight. Trenchless cable installation methods, such as Horizontal Directional Dirlling ("HDD"), which typically provide less disturbances and impacts to environmentally sensitive resources, were evaluated to cross Barnegat Bay. Ultimately, as discussed in detail in the provided Alternatives Analysis, dated January 2023, and found in Appendix A of the submitted application, the use of HDD to install the cables across Barnegat Bay would result in greater impacts to environmentally sensitive aquatic resources due to necessary staging to accommodate numerous HDD installations as the length limit is too great for one HDD installation.

The jetting method of installation will temporarily disturb the sediment, but will not result in any permanent sediment removal from the created cable trenches. As discussed in BOEM's DEIS and in the

State permit application, the areas are expected to recolonize naturally once the temporary disturbance of sediment is completed. As the area is likely to revert to conditions suitable for recolonization of shellfish, the destruction of habitat will not occur from the installation of the electric transmission cables in Barnegat Bay. However, mitigation is required due to the impacts to mapped shellfish habitat during the installation of the electric transmission cables. Mitigation is being provided in the form of a contribution to the Department's Shellfish Habitat Mitigation Fund. There are no surf clam habitats within the State project portion of the project as confirmed by the Department's Marine Resource Administration ("MRA"). Therefore, the State project will not impact any surf clam habitat.

Migratory Birds

Information provided in the State project permit application and detailed in the Division's environmental report accompanying the State permit indicate that the construction of the State project will result in the disturbance of 16.119 acres of woody vegetation considered critical habitat for migratory birds as a result of the cable installation and substation construction along the Oyster Creek cable route. Pursuant to N.J.A.C. 7:7-9.37, the disturbance of critical wildlife habitat is discouraged unless there is no prudent or feasible alternative, the disturbance is minimized, and appropriate mitigation is provided to compensate for the disturbance. In this case, Ocean Wind LLC provided an analysis of several alternative locations for the cable route and substation. Upon close review of the analysis, the Division determined there is no prudent alternative feasible location for the cable route and substation that would result in less disturbance to critical wildlife habitat. The Oyster Creek Nuclear Generating Station site was chosen for the onshore substation because it had been historically disturbed as part of the development of the nuclear power plant. In addition, the electric transmission cables along the Oyster Creek cable route have been sited in maintained and historically disturbed areas to the maximum extent practicable to limit woody vegetation clearing. There are no proposed disturbances to critical wildlife habitat at the B.L. England substation location or along the cable route. A permit condition will be included requiring Ocean Wind LLC to mitigate for the disturbance to the 16.119 acres of critical wildlife habitat.

The Watershed and Land Management Program's Endangered and Threatened Species staff have determined that with appropriate timing conditions, the onshore component of the project will not have an adverse impact on any endangered or threatened bird species.

Federal Project

Fish and Shellfish

As discussed within the DEIS, even in the absence of the offshore component of the project, impacts to commercial fisheries and for-hire recreational fisheries are expected as a result of climate change events, such as increased magnitude or frequency of storms, shoreline changes, ocean acidification, and water temperature changes. The DEIS cites studies by Barange et al (2018) and Hare et al (2016) that conclude the catch potential for the temperate Northeast Atlantic is projected to decrease between now and the 2050's. For approximately half of the 82 species assessed, the authors of these studies report that overall climate vulnerability is high to very high, with diadramous fish (fish that migrate between fresh and salt water) and benthic species such as surf clam, ocean quahog, and scallops exhibiting the highest vulnerability. The DEIS also reported that most species included in the assessment have a high potential for a change in distribution in response to projected changes in climate. Adverse effects of climate change are expected for approximately half of the species assessed, while Hare (2016) foresees some beneficial impacts to approximately 17 percent of the species, including longfin squid, butterfish, and Atlantic croaker. The conversion from burning fossil fuels to renewable energy sources will mitigate these adverse changes.

Specific to the project, WTG foundations and associated scour protection would convert the sand or sand and gravel seafloor habitat favored by surf clams, sea scallops, squid, and summer flounder with

hard structures favored by lobsters, striped bass, black sea bass and cod. In addition, the northeastern corner of the Lease Area contains sand and trough features, which provide valuable fishery habitat. Sand and trough features provide physical structural habitat for fish species, that provide the benefits of greater species diversity and abundance. Because of the habitat that these features provide, BOEM is considering a modification to the wind turbine layout under Alternative D to minimize impacts to the sand and trough features. Under Alternative D, up to 15 WTGs would be eliminated. The selection of Alternative D with the exclusion of more than 9 WTGs would be contingent however, on a larger turbine with a 240-meter rotor diameter being commercially available when BOEM issues its ROD (Record of Decision) as well as its technical and economic feasibility, and consistency with the purpose and need. In addition, to minimize impacts to sand ridges and troughs, BOEM is considering micro siting WTGs D06 and E05 out of the sand ridge or trough centerline buffer areas; minimizing perpendicular crossings of sand ridges and troughs by the inter-array cables; and avoiding the use of concrete mattresses as cable protection in sand ridge/trough habitats to the extent possible.

As proposed, the offshore component of the project, including the WTGs, the substation foundations, and cables have the potential to reduce fishing access and increase the risk of damage to fishing gear. To mitigate the impacts, Ocean Wind LLC proposes to space the WTGs 1 nautical mile by 0.8 nautical mile between WTGs in a southeast-northwest orientation to better accommodate commercial fishing vessels transiting the offshore lease areas and commercial fishing path orientations, the burial of the cable to minimum depths deeper than trawl gear would penetrate, and financial compensation programs for lost or entangled gear.

Further, a MOU to be executed by the Department and Ocean Wind LLC will establish a Compensatory Mitigation Fund to compensate fishers for verifiable claims of negative impacts of a significant nature, including economic losses, caused by the Ocean Wind 1 offshore wind facility during its construction, operation and/or decommissioning. The Letter of Intent to execute the MOU was executed by the Department and Ocean Wind LLC on April 26, 2023.

Migratory Birds

According to the DEIS, the locations of the Outer Continental Shelf (OCS) offshore wind lease areas were selected to minimize impacts on all resources, including birds. Within the Atlantic Flyway along the North American Atlantic Coast, much of the bird activity is concentrated along the coastline. Waterbirds use a corridor between the coast and several kilometers out onto the OCS, while land birds tend to use a wider corridor extending from the coastline to tens of kilometers inland. The offshore WTGsare positioned 15 miles offshore. Ocean Wind LLC performed an exposure assessment to estimate the risk of various offshore bird species encountering the Wind Farm Area (COP Volume III, Appendix H; Ocean Wind 2022). Most species were identified as having “minimal” to “low” overall exposure risk. According to the DEIS, because the relative density of birds in the Outer Continental Shelf is low, relatively few birds are likely to encounter Wind Turbine Generators.

The project is not expected to impact the State listed endangered piping plover, because piping plovers would only be found near the shore during breeding season. In addition, during migration periods piping plovers have been found to fly at heights above the rotor-swept-zone of the Wind Turbine Generators, typically between 3,000 and 6,500 feet. In the near shore environment, piping plovers are expected at much lower heights.

Impacts to submerged aquatic vegetation

Comment

The DEP should reject the application under consideration because it would authorize unacceptable impacts to SAV in Barnegat Bay.

Response

As discussed in the environmental report accompanying the State permit application, N.J.A.C. 7:7-9.6(b)1, permits the disturbance of submerged aquatic vegetation (SAV) for trenching for utility pipelines and submarine cables provided the impact is minimized and the area is restored to its pre-construction condition. The proposed Oyster Creek cable route within Barnegat Bay will disturb 2.971 acres of mapped SAV habitat.

Initially, it was proposed in the State permit application to utilize an HDD method of cable installation as the primary installation methodology. However, correspondence dated March 14, 2023 received from the Applicant indicates that the results of subsequent feasibility assessments conducted by the Applicant's engineers confirm that there is a likely possibility of an inadvertent return of drilling fluid if HDD cable installation methodology is utilized at the Holtec Landfall location. An inadvertent return of drilling fluid would result in significant impacts to water quality and protected resources within Barnegat Bay. In addition, the use of HDD to install the cables across Barnegat Bay would result in greater impacts to environmentally sensitive aquatic resources because multiple HDD installations would be necessary. Therefore, the permit authorizes installation of the electric transmission cables through either jetting as the primary installation method or open-cut/trenching as a secondary installation method, as jetting installation methods will result in less impacts to SAV habitat than open-cut/trenching.

The 2.971-acre impact to mapped SAV habitat is based upon available mapping and represents a worst case scenario. To determine the precise impacts to suitable SAV habitat and existing SAV beds, Ocean Wind LLC shall conduct pre-construction and post-construction surveys to more accurately quantify impacts to existing SAV beds and suitable habitat. The pre-construction survey will be utilized to accurately inform the Department of the State project's impacts to SAV habitat and to aid in formulating a restoration and/or mitigation plan for both temporary and permanent impacts as required under N.J.A.C. 7:7-17.10.

As set forth above, primary use of jetting installation methods will minimize disturbance to SAV, and implementation of the pre-construction survey to inform required restoration and/or mitigation will mitigate unavoidable impacts to SAV.

Impacts to wetlands and riparian buffers

Comment

DEP should exercise its discretion to reject the State permit application under consideration on the basis that neither the agency nor the applicant can demonstrate that the proposed jet-plowing activities will be performed in a manner that is safe for Barnegat Bay's wetlands and riparian buffers.

Response

A detailed discussion of the State project's compliance with the applicable CZM Rules, FWW Rules, and FHA Rules pertaining to development activities in wetlands and riparian zones is available in the environmental report accompanying the State permit. The jet-plowing activities within Barnegat Bay are not anticipated to have any impact on any wetlands or riparian buffers as jet-plowing activities will not occur within these areas. Additionally, the use of best management practices ("BMPs") will be required during cable installations within Barnegat Bay to reduce turbidity and prevent sedimentation of any wetlands and/or other vegetation in the project's vicinity.

Riparian Zones

The State project's intended cable installation method of jetting in Barnegat Bay will not impact any riparian zone vegetation. The use of jetting cable installation methods within areas of Barnegat Bay is necessary due to the potential for inadvertent drilling fluid returns if HDD trenchless installation

methods are utilize and due to the length of the electric transmission cable installations crossing Barnegat Bay, which would result in significant adverse environmental impacts to sensitive marine resources. The length of the electric transmission cables crossing Barnegat Bay would require numerous HDD entry and exit pits and associated construction staging, resulting in greater impacts to sensitive environmental resources than utilizing jetting installation technology. Where deemed feasible, the use of HDD installation methods will be used, such as beneath Crook Horn Creek, beneath Route 9 and Oyster Creek, and along the cable landfalls in IBSP and Ocean City. During jetting installation of the electric transmission cables, the Applicant will be required to implement BMPs, such as the use of turbidity curtains, to reduce turbidity and sedimentation as described above.

The installation of the electric transmission cables on-land via traditional open-cut/trenching methods along the Oyster Creek cable route will result in the disturbance of 1.636 acres of riparian zone vegetation for placement of matting for a period exceeding six (6) months for access to the work locations. The installation of the electric transmission cables and construction of the substation along the B.L. England cable route will not result in any temporary or permanent impacts to riparian zone vegetation.

In accordance with N.J.A.C. 7:13-11.2(k), it is permissible to disturb 30 square feet of riparian vegetation per linear foot of utility line. The Oyster Creek cable route proposes the placement of approximately 3,950 linear feet of electric transmission cables within riparian zones. Therefore, the allowable disturbance to riparian zone vegetation would be approximately 117,960 square feet or 2.71 acres. The proposed disturbance to riparian zone vegetation will not exceed the allowable disturbance up to 2.71 acres. The Department has discretion per the definition of "temporary" at N.J.A.C. 7:13-1.2 to allow activities beyond a six (6) month timeframe and consider them temporary provided the areas will be restored to their original topography and all necessary measures are implemented to ensure that the original vegetative cover is restored to its previous or an improved condition. The temporary matting for construction access is intended to remain in place no more than 12 months. The Department will consider this temporary disturbance provided, in accordance with N.J.A.C. 7:13-11.2(z) of the FHA Rules, restoration of these areas is implemented in accordance with the applicable rule requirements. The appropriate conditions for restoration of temporary disturbances are outlined in the State permit.

Wetlands

The State project's intended cable installation method of jetting in Barnegat Bay will not impact any wetlands. The use of jetting cable installation methods within areas of Barnegat Bay is necessary due to the potential for inadvertent drilling fluid returns if HDD trenchless installation methods are utilize and due to the length of the electric transmission cable installations crossing Barnegat Bay, which would result in significant adverse environmental impacts to sensitive marine resources. The length of the electric transmission cables crossing Barnegat Bay would require numerous HDD entry and exit pits and associated construction staging, resulting in greater impacts to sensitive environmental resources than utilizing jetting installation technology. Where deemed feasible, the use of HDD installation methods will be used, such as beneath Crook Horn Creek, beneath Route 9 and Oyster Creek, and along the cable landfalls in IBSP and Ocean City. During jetting installation of the electric transmission cables, the Applicant will be required to implement BMPs, such as the use of turbidity curtains, to reduce turbidity and sedimentation as described above.

The installation of the electric transmission cables on-land via traditional open-cut/trenching methods along both the Oyster Creek cable route and B.L. England cable route will result in impacts, both temporary and permanent, to mapped coastal wetlands, unmapped coastal wetlands, state open waters, freshwater wetlands, and associated transition areas or buffers. The details of disturbances to each of these environmentally sensitive areas is outlined in the environmental report accompanying the State permit application. It is important to note that the appropriate restoration and/or mitigation will be

provided for these impacts in accordance with N.J.A.C. 7:7-17.13 of the CZM Rules and N.J.A.C. 7:7A-11 of the FWW Rules. Restoration activities and mitigation requirements are outlined in detail in the conditions of the State permit. Additionally, BMPs, such as the use of silt fence and other sediment barriers, are required during construction to prevent sedimentation of the remaining, undisturbed wetlands and transition areas.

Impacts to the marine environment

Comment

The offshore wind project will result in impacts to the marine environment, such as oil leaking from generators within the nacelles.

Response

As discussed within the DEIS, the Project would have a maximum of 39,690 gallons of coolants, 426,671 gallons of oils and lubricants, and 236,216 gallons of diesel stored within WTG foundations and Offshore Substations according to the DEIS. BOEM anticipates that the risk of spills from any single offshore structure would be low, and any effects would be localized. Based upon modelling for an area near the Project (Maryland WEA), it is estimated that the most likely type of spill to occur during the life of a project is 90-440 gallons, which would have brief, localized impacts on water quality.

Under a maximum-case accidental release scenario, there is a potential for moderate water quality impacts. However, the likelihood of such an event is low and therefore the most likely spill event would be small and of low frequency occurrence. As discussed within the DEIS, any overall impacts to water quality is expected to be short term, localized, and minor, resulting in little change to water quality. In addition, a Spill Prevention, Control, and Countermeasure Plan will be developed in accordance with all regulatory requirements and implemented during all phases of the project to minimize impacts to water quality.

The Federal project will not efficiently or effectively generate electricity

Comment

The offshore wind project will not efficiently or effectively generate electricity.

Response

While this comment is outside the purview of the Division's review of the project's environmental impacts under the CZM, FHA, and FWW rules, we summarize the information submitted by the applicant for informational purposes.

According to the Construction and Operation Plan (COP) submitted to BOEM, the Ocean Wind 1 offshore wind farm is anticipated to power approximately 500,000 New Jersey homes and will help New Jersey achieve its renewable energy generation goal of supplying more than 1.5 million New Jersey homes with offshore wind power. The construction of the Ocean Wind 1 offshore wind farm is intended to contribute to New Jersey's clean energy goals, specifically the goal of 11 gigawatts (GW) of offshore wind energy generation by 2040 as outlined in New Jersey's Governor's Executive Order No. 307, issued on September 21, 2022. Further, it is intended to fulfill the New Jersey's Board of Public Utilities (BPU) September 20, 2018, solicitation for 1,100 megawatts (MW) of offshore wind that was awarded to Ocean Wind LLC, via the New Jersey BPU on June 21, 2019 (BPU Docket No. QO18121289). BPU is the agency with the responsibility to determine the project's effectiveness to create energy and BPU identified 1,100 megawatts of offshore wind as the required capacity of the Project.

Historically the power grid in New Jersey was built up to supply the main load centers from large conventional fuel generation, such as coal, oil, gas and nuclear, as well as interconnection with the rest of the state and neighboring states. Two large generators of this type have recently retired on the Atlantic Coast, which were connected to the grid near the Ocean Wind 1 offshore wind farm. These are the Oyster Creek nuclear (636 MW) and the BL England coal, oil, and diesel (450 MW) generators. The power output of these plants was less than the planned capacity of the Ocean Wind 1 offshore wind farm. The Project would have long term beneficial impacts as it is an air quality impact avoidance measure that would result in a long-term net reduction of regional air pollution over the life of the Project through displacement of fossil fuel-generated power plants. Offshore Wind projects by design generate electricity from the wind that blows across the oceans. Offshore Wind projects benefit from the reliability of ocean winds, the higher wind speeds over associated with the ocean versus on over land, and the lack of physical interferences that can be encountered on land. Turbine blades positioned hundreds of feet into the air are also exposed to much faster and almost constant wind allowing them to generate electricity even when there is no wind on land.

Impacts to tourism

Comment

The offshore wind project will have an adverse impact upon tourism.

Response

As discussed in the DEIS, a University of Delaware study evaluating the impacts of visible offshore WTGs on beach use found that WTGs visible more than 15 miles from the viewer would have negligible impacts on businesses dependent on recreation and tourism activity (Parsons and Firestone 2018). The study participants viewed visual simulations of WTGs in clear, hazy, and nighttime conditions without Aircraft Detection Lighting Systems (ADLS). A 2017 visual preference study conducted by North Carolina State University evaluated the impact of offshore wind facilities on vacation rental prices. The study found that nighttime views of aviation hazard lighting (without ADLS) for WTGs close to shore (5 to 8 miles [8 to 13 kilometers]) would adversely affect the rental price of properties with ocean views (Lutzeyer et al. 2017). It did not specifically address the relationship between lighting, nighttime views, and tourism for WTGs 15 or more miles (24.1 or more kilometers) from shore. More than 95 percent of the WTG positions likely to be present based on anticipated offshore wind lease area build-out in the geographic analysis area would be more than 15 miles (24.1 kilometers) from coastal locations with views of the WTGs.

Ocean Wind LLC has committed to installing ADLS on WTGs to meet FAA nighttime lighting requirements instead of standard warning lights. ADLS's activate the hazard lighting system in response to detection of nearby aircraft. The synchronized flashing of the navigational lights occurs only when an aircraft is within a predefined distance of the structures, resulting in shorter-duration night sky impacts on the seascape, open ocean, landscape, and viewers. The shorter-duration synchronized flashing of ADLS is anticipated to have reduced visual impacts at night as compared to standard continuous, medium-intensity red strobe FAA warning system due to the duration of activation. It is anticipated that the reduced time of FAA hazard lighting resulting from an implemented ADLS would reduce the duration of the potential impacts of nighttime aviation lighting to less than 1 percent of the normal operating time that would occur without using ADLS. Technology.

As further discussed in the DEIS, the presence of offshore WTGs and OSSs would change perceptions of ocean scenes from natural and undeveloped to a developed wind energy environment characterized by WTGs and OSSs. In clear weather, the WTGs and OSSs would be an unavoidable presence in views from the coastline, with moderate to major effects on seascape character and landscape character. Nonetheless, the DEIS states that visitors are expected to be able to continue to pursue

activities that rely on other coastal and ocean environments, scenic qualities, natural resources, and establishments that provide services to recreation and tourism. The DEIS concludes that seaside locations could experience some reduced recreational and tourism activity, but the visible presence of WTGs would be unlikely to affect shore-based or marine recreation and tourism in the geographic analysis area as a whole.

Project is inconsistent with the Coastal Zone Management Rules, N.J.A.C. 7:7-1.1 et seq.

Comment

The offshore wind project will impact New Jersey's coastal zone and it would clearly be inconsistent with a number of key requirements in New Jersey's CZM Rule 7:7. Appendix Q of the Construction and Operations Plan ("COP") grossly neglects major aspects of N.J.A.C. 7:7-15.4 Energy Facility which clearly apply to the project and the treatment of CZM Rule 7:7-15.7 Industry, is inadequate. Other CZM Rules generally identified with non-compliance issues. The project is inconsistent with several Coastal Zone Management Rules; specifically, N.J.A.C. 7:7-9.3 Surf clam areas, N.J.A.C. 7:7-9.4 Prime fishing areas, N.J.A.C. 7:7-9.5 Finfish migratory pathways, N.J.A.C. 7:7-9.6 Submerged vegetation habitat, N.J.A.C. 7:7-9.7 Navigation channels, N.J.A.C. 7:7-9.36 Endangered or threatened wildlife or plant species habitats, N.J.A.C. 7:7-15.4 Energy facility, N.J.A.C. 7:7-16.2 Marine fish and fisheries, N.J.A.C. 7:7-16.3 Water quality and N.J.A.C. 7:7-17 Mitigation.

Response

The Division's review included information submitted by the Applicant within the COP; specifically, Appendix Q titled "Coastal Zone Management Consistency Assessment", as well as BOEM's prepared DEIS. Impacts identified in the COP have been evaluated by BOEM with appropriate mitigation measures proposed to address those impacts, resulting in a minimization of adverse impacts. Additionally, information contained in the State permit application, specifically in the project narrative and compliance statement document as well as the accompanying appendices, outlines how the Applicant intends for the State project to comply with applicable CZM Rules, FHA Rules, and FWW Rules. Confirmation of both the Federal project and State project's consistency and/or compliance with the applicable State regulations is detailed in the Federal Consistency Certification and State permit accompanying environmental reports.

As mentioned above, the environmental reports for both the Federal Consistency Certification and State permit detail how the components of the Federal project and State project meet the applicable CZM regulations, including but not limited to N.J.A.C. 7:7-15.4 Energy facility, N.J.A.C. 7:7-15.7 Industry, N.J.A.C. 7:7-9.3 Surf clam areas, N.J.A.C. 7:7-9.4 Prime fishing areas, N.J.A.C. 7:7-9.5 Finfish migratory pathways, N.J.A.C. 7:7-9.6 Submerged vegetation habitat, N.J.A.C. 7:7-9.7 Navigation channels, N.J.A.C. 7:7-9.36 Endangered or threatened wildlife or plant species habitats, N.J.A.C. 7:7-16.2 Marine fish and fisheries, N.J.A.C. 7:7-16.3 Water quality and N.J.A.C. 7:7-17 Mitigation. Furthermore, impacts to shellfish, SAV, wetlands, riparian zone vegetation, migratory birds, threatened and/or endangered species, marine fish and fisheries, and viewshed are discussed further in this comment response document. All necessary mitigation and/or restoration measures for impacts to shellfish habitat, submerged aquatic vegetation habitat, wetlands, wetlands transition areas, riparian zone vegetation, critical wildlife habitat, marine fish and fisheries, and historic and archaeological resources are outlined in the conditions in the State permit and Federal Consistency Certification. Additionally, the State permit and/or Federal Consistency Certification conditions also require timing restriction on construction activities to eliminate adverse impacts to threatened and/or endangered species and their habitats. BMPs are also required to be implemented to protect environmentally sensitive resources from unintended adverse impacts. With adherence to the conditions of the State permit and Federal Consistency Certification, the components of the State project and Federal project meets the requirements of, and are

consistent with, all applicable CZM, FHA & FWW regulations. Where required, mitigation for impacts to regulated resources will be implemented in accordance with N.J.A.C. 7:7-17 and N.J.A.C. 7:7A-.11.

Mitigation

Comment

The DEP should require mitigation for impacts to shellfish habitat, compensate fishermen for their losses and consider financial assurances for decommissioning.

Response

The Division did not consider a mitigation proposal in determining whether to approve the State permit application or make a finding of consistency under the Federal Consistency Certification. In accordance with Subchapter 17 of the CZM Rules, any authorized impacts to regulated resources will be required to mitigate for those impacts as conditions of the appropriate authorization.

As discussed in the environmental report accompanying the State permit, the Division is requiring mitigation in accordance with N.J.A.C. 7:7-17 for impacts to mapped shellfish habitat due to installation of the onshore export cables within estuarine areas. The required monetary contribution to the Department's dedicated account for shellfish habitat mitigation is included as a condition of the State permit and must be fulfilled prior to any construction within State waters. Additionally, the Applicant is coordinating with BOEM on a fisheries mitigation plan intended to mitigate the project's potential effects on marine fish and fisheries. Mitigation efforts outlined in the plan under development include implementation of an updated gear claim procedure to exist for the life of the project in the event of any damage to commercial fishing gear from the overall project, implementation of a direct compensation program for impacted fishermen existing for the life of the project, and creation of a navigational safety fund to enable eligible fishermen to acquire navigation equipment to navigate the Applicant's leased wind farm area. These mitigating measures will help alleviate impacts to New Jersey based marine fisheries.

Additionally, DEP and Ocean Wind LLC have agreed (LOI) to enter into an MOU for fisheries compensation to establish a Compensatory Mitigation Fund to compensate fishers for verifiable claims of negative impacts of a significant nature, including economic losses, caused by the Ocean Wind 1 offshore wind facility during its construction, operation and/or decommissioning. The Letter of Intent to execute the MOU was executed by the Department and Ocean Wind LLC on April 26, 2023.

The DEP does not have a requirement that financial assurances be provided for decommissioning.

Lack of Baseline & Cumulative Impact Assessments

Comment

Comments were received which expressed concerns that DEP does not currently possess sufficient baseline data to analyze the effects of wide-scale offshore wind energy projects, including the cumulative effects on the physical and biological ocean environment. Further, from this perspective, DEP must assess the overall impacts of the scale and magnitude of massive wind energy development within and beyond the wind farm areas in progress in the New York/New Jersey Bight.

Response

While this comment includes elements which are beyond the scope of the Division's review of the project's environmental impacts under the CZM, FHA, and FWW rules, we summarize the information submitted by the applicant and information developed by the Department for informational purposes.

Between 2008 and 2009, the NJDEP's Office of Science conducted a study to obtain data on ecological resources in the Atlantic Ocean offshore New Jersey. The scope of work included data on the distribution, abundance and migratory patterns of avian, marine mammal, sea turtle and other species in the study area. The study area extends roughly 72 nautical miles from Seaside to Stone Harbor, beginning at the shoreline and extending out 20 nautical miles seaward.

In July 2010, the Ocean/Wind Power Ecological Baseline Studies Final Report (https://dep.nj.gov/offshorewind/resources/#ecological-baseline-studies) was published. The results of this report were instrumental in identifying suitable areas for siting future wind energy facilities offshore of New Jersey. Information gathered as part of this survey effort has also been used to inform other offshore wind studies and analyses, such as those studies and analyses contained within the DEIS.

As discussed within the DEIS, in accordance the regulations implementing NEPA, when an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an EIS and when information is incomplete or unavailable, the agency shall make clear that such information is lacking. When incomplete or unavailable information was identified, BOEM considered whether the information was relevant to the assessment of impacts and essential to its analysis of alternatives based upon the resource analyzed. If essential to a reasoned choice among the alternatives, BOEM considered whether it was possible to obtain the information and if the cost of obtaining it was exorbitant. If it could not be obtained or if the cost of obtaining it was exorbitant, BOEM applied acceptable scientific methodologies to inform the analysis in light of this incomplete or unavailable information. For example, conclusive information on many impacts of the offshore wind industry may not be available for years, and certainly not within the contemplated timeframe of this NEPA process. However, if this information is essential for a reasoned decision, subject matter experts have used the scientifically credible information available and generally accepted scientific methodologies to evaluate impacts on the resources while this information is unavailable.

The Department similarly applied this approach to utilize its own subject matter experts who considered available scientifically available information and generally accepted scientific methodologies to evaluate impacts on resources under the Division's purview. As referenced within the environmental reports prepared for both the Offshore component and State permit application, the Division has determined that the project is conditionally compliant and consistent with the applicable Rules.

Lack of Basic Information and Evidence of CO2 Reduction

Comment

The State of New Jersey or applicants have not provided the evidence of how the clean ocean economy and the industrial development, specifically offshore wind energy, can co-exist, and do not have the resources, information, and expertise to assess, review, and evaluate the extent of the impacts to resources.

Response

While portions of this comment outside the purview of the Division's review of the project's environmental impacts under the CZM, FHA, and FWW rules, we summarize the information submitted by the applicant for informational purposes.

BOEM and the Department have the expertise and ability to review and evaluate the extent of the project impacts to resources. The Division is tasked with reviewing development applications within State jurisdiction for consistency with applicable land use regulations and has the expertise to do so in conjunction with other State agencies and Department programs. The project has been evaluated for impacts to wetlands, submerged aquatic vegetation, shellfish, marine fish and fisheries, threatened and/or endangered species, water quality, air quality and scenic resources and design, for example. As discussed

in detail in the environmental reports accompanying the Federal Consistency Certification and State permit, the Division has determined that the project is in compliance with the applicable state regulations outlined in the CZM Rules, FHA Rules and FWW Rules. All necessary mitigation and/or restoration measures and use of BMPs are included as conditions of both the State permit and Federal Consistency Certification to ensure that the project compensates for specified environmental impacts and does not result in unintended adverse impacts.

However, both the DEIS prepared by BOEM and the Department have concluded that the project is likely to impact commercial and recreational fishing industries. To that end, a MOU to be executed by the Department and Ocean Wind LLC will establish a Compensatory Mitigation Fund to compensate fishers for verifiable claims of negative impacts of a significant nature, including economic losses, caused by the Ocean Wind 1 offshore wind facility during its construction, operation and/or decommissioning. The Letter of Intent to execute the MOU was executed by the Department and Ocean Wind LLC on April 26, 2023. In addition, a mitigation will be required for the impacts related to the components of the project submit to State permitting, including but not limited to shellfish habitat and submerged aquatic habitat mitigation.

It is anticipated that there will be temporary inconveniences to recreational boaters who will have to navigate around anchored vessels involved with project construction. The Applicant has committed to voluntarily implement ADLS as a mitigating measure that would activate the WTG lighting only when aircraft approach the WTGs. The implementation of ADLS would reduce the duration of the potential impacts of nighttime aviation lighting to less than 1 percent of the normal operating time that would occur without using ADLS.

The DEIS concludes that seaside locations could experience some reduced recreational and tourism activity, but the visible presence of WTGs would be unlikely to affect shore-based or marine recreation and tourism in the geographic analysis area as a whole.

Environmental Impacts- Offshore, Nearshore & Onshore, Threatened & Endangered Species, Marine Mammals, Sea Turtles, Barnegat Bay, Wetlands & Submerged Aquatic Vegetation, Water Quality & Tidelands, Marine Fish & Fisheries, Dredging, Air Quality and Maintenance & Management of Materials

Comment

The state permit applications were deemed “complete” by NJDEP; yet the application lacks important details and skirts responsibilities for environmental impacts. Further, while this permit application is for the areas within state waters, it is imperative that NJDEP consider and assess the impacts from the infrastructure that will be connected to and within offshore federal waters as they impact state resources. Specific comments are provided under each category listed above.

Response

The Division has extensively reviewed the submitted application materials for the State permit application, including extensive coordination with other Department programs. That extensive coordination resulted in changes to project design elements which has reduced proposed impacts to regulated resources. Other impacts have been evaluated using a design envelope approach which estimates the most impact that may occur, with applicable mitigative measures required to compensate for those impacts. While the State project is anticipated to impact several environmentally sensitive resources, all of the specified impacts are consistent with allowances in the CZM Rules, FHA Rules, and FWW Rules with the appropriate compensating and mitigating measures, which are included as conditions of the State permit.

The aspects of the Federal project within federal waters have been evaluated under the Federal Consistency Certification request and been determined to be conditionally compliant with the enforceable policies of the CZM Rules.

The following provides specific responses to each category of environmental impacts discussed within this comment:

- *Offshore impacts regarding the three offshore substations and potential impacts to all species of nearshore animals in state waters*. Any proposed impact associated with installation of the offshore substations, as well as the WTGs, with the potential to affect the State's coastal uses and resources has been evaluated in the review of the Federal Consistency Certification request with compliance demonstrated as outlined in that environmental report.

- *Nearshore and onshore impacts including risk of inadvertent return with HDD installation methods and impacts to submerged aquatic vegetation*. As indicated by the Applicant in the State permit application, engineering analysis and feasibility studies have determined that the use of HDD electric transmission cable installations will not be feasible in several locations along the cable routes. However, HDD is intended to be utilized for cable installations at four (4) locations: from the Atlantic Ocean to IBSP, from the Atlantic Ocean to 35th Street in Ocean City, beneath Crook Horn Creek, and beneath State Route 9 and Oyster Creek. While HDD installation technology has been evaluated as being feasible at these locations, Appendix P of the State permit application contains an HDD Drilling Contingency Plan in the event of an inadvertent return of drilling fluid during cable installations. Impacts to nearshore and onshore State protected resources, including submerged vegetation habitat, are discussed in detail in the environmental reports accompanying both the State permit and Federal Consistency Certification. While the State project will impact areas mapped as submerged aquatic vegetation habitat, mitigation is required. The Applicant will be providing the Department with a pre-construction survey in order to accurately quantify impacts to submerged aquatic vegetation beds and areas suitable for SAV colonization. A mitigation plan for those impacts will be formulated in coordination with the Division and the Department's Marine Resource Administrative ("MRA").

- *Impacts to threatened and endangered species.* As detailed in the environmental report accompanying the State permit, portions of the work on land and in State waters will be located in areas of threatened and/or endangered species habitat. Timing restrictions on construction activities will be incorporated into the State permit to prevent adverse impacts to sensitive habitat for osprey and northern long-eared bat. Additional measures will be included in the permit to protect sensitive beach nesting-bird habitat and protected marine mammal species.

- *Impacts to marine mammals.* Pursuant to 16 U.S.C. 1379 Sec. 109, of the Marine Mammal Protection Act, no State may enforce, or attempt to enforce, any State law or regulation relating to the taking of any species (which term for purposes of this section includes any population stock) of marine mammal within the State unless the Secretary has transferred authority for the conservation and management of that species (hereinafter referred to in this section as "management authority") to the State under subsection (b)(1). Therefore, the Marine Mammal Protection Act preempts State laws related to endangered or threatened marine mammals. To prevent any adverse impacts to marine mammals, Ocean Wind LLC proposes such as the implementation of offshore and nearshore marine waters monitoring by approved protected species observers and the adjustment of vessel speeds to minimize marine mammal collisions.

- *Impacts to sea turtles.* Four species of sea turtles are known to occur in or near the Ocean Wind 1 offshore wind farm project area, all of which are protected under the Endangered Species Act (16

USC 1531 et seq.). These include the leatherback sea turtle (Dermochelys coriacea), loggerhead sea turtle (Caretta caretta), Kemp's ridley sea turtle (Lepidochelys kempii), and green sea turtle (Chelonia mydas). Sea turtle nesting does not occur in New Jersey and there are no nesting beaches or other critical habitats in the vicinity of the Project (GARFO 2021). Individuals occurring in the Project area are either migrating or foraging and are likely to spend the majority of time below the surface. It is anticipated that may be minor impacts to sea turtles from construction related activities, such as boat collisions. It also anticipated that the presence of underwater cables and the wind turbine generators could have a positive impact on turtles due to the reef effect caused by these structures. No adverse effects on sea turtles have been documented to occur from the numerous submarine power cables around the world. In addition, no nesting beaches, critical habitat, or other biologically important habitats were identified in the offshore export cable corridor.

BOEM and other federal agencies have proposed measures to minimize impacts on sea turtles, including establishing vessel speeds and having dedicated observers on vessels to identify and avoid sea turtles. Given the mobility of sea turtles and the use of trained, dedicated protected species observers, vessel speed restrictions, and protected species identification training and implementation of monitoring/clearance zones and shutdown zones, interactions between Project vessels and sea turtles would be reduced. Protected species observers would be provided by a third party. Monitoring at night or in low-visibility conditions, protected species observers would use night-vision goggles with thermal clip-ons, a hand-held spotlight, or a mounted thermal camera system. However, sea turtles are not fast swimmers and have difficulty detecting vessels traveling more than 4 kilometers per hour (Hazel et al. 2007). Also, sea turtles are hard to detect in the open ocean. While these mitigation measures would reduce the probability of a Project-related vessel strike, they would not result in complete avoidance. The Project would have a period of peak vessel activity lasting approximately 1 year (during construction and installation of offshore export cables, WTGs, OSS, and inter-array cables). However, avoidance measures would be designed to avoid vessel strikes on sea turtles by reducing vessel speed and avoiding sighted turtles. The additional measure of training personnel to watch for and report sea turtles would further increase vigilance to avoid striking sea turtles. These mitigation measures will be enforced by BOEM, National Marine Fisheries, and the Department of Interior's Bureau of Safety and Environment Enforcement.

- *Impacts to Barnegat Bay.* As discussed in the environmental report accompanying the State permit application as well as previously in this Response to Comments document, the State project will result in impacts to regulated resources in Barnegat Bay, such as shellfish and SAV habitat. The appropriate mitigation and/or restoration measures are required as a condition of the State permit. Timing restrictions on construction activities within Barnegat Bay are also required to protect spawning activities during migration of diadromous fish. Additionally, implementation of BMPs during construction activities, such as the use of cofferdams and turbidity curtains, within Barnegat Bay will be required per the State permit to prevent adverse impacts on the water quality of the bay.

- *Impacts to wetlands and submerged aquatic vegetation.* As discussed in the environmental report accompanying the State permit application as well as previously in this Response to Comments document, the appropriate mitigation and/or restoration measures are required for the project's impacts to wetlands and SAV. Additionally, cable installation methods to be utilized are those that minimize impacts to wetlands and SAV to the maximum extent feasible. The onshore cables and substations will be located in maintained rights-of-way and disturbed areas to the maximum extent practicable to minimize impacts to sensitive, regulated environmental resources.

- *Impacts to water quality and Tidelands.* The State project will occur within areas under the jurisdiction of the Department's Bureau of Tidelands. The Applicant has submitted the appropriate applications to the Bureau of Tidelands for the use of the state waters. Specifically, Tidelands applications are pending under file# 0000-21-0008.2 TDI220001, TDI220002, TDI220003 & TDI220004 for utility licenses for the areas occupied by the electric transmission cables and licenses for the open-cut/trenching cable installations in State waters. The State permit will be conditioned upon the Applicant receiving the required licenses prior to beginning any of the work within State waters.\

  Within State waters, sediment sampling and material characterization for potential contaminants was undertaken at the locations of the proposed HDD pits, at the Holtec Landfall location, and within the prior disturbed channel off the western coast of IBSP. A detailed description of the results of the sampling can be found in the Division's dredging specialist's April 19, 2023 report, which is part of the State permitting record. Recharacterization of sediments will be required at the Holtec Landfall location and in the prior disturbed channel if open-cut/trenching depths change for cable installation. The appropriate conditions for additional sampling will be added to the permit. In order to prevent adverse impacts to water quality along the cable installation route, the most stringent BMPs are imposed per conditions of the permit to ensure adverse effects to water quality during jetting or trenching operations are minimized to the maximum extent possible. BMPs to be imposed include the use of sheet pile cofferdams, turbidity curtains, and construction methods to prevent adverse effects to water quality.

  For locations in State waters where HDD is the proposed cable installation method, contingency plans have been prepared in the event of an inadvertent return of drilling fluid during cable installations. The contingency plan can be found in Appendix P of the State permit application.

  With adherence to the appropriate permit conditions as well as the prepared Inadvertent Returns Contingency Plans, water quality is not anticipated to be adversely impacted during cable installations in State waters.

  For the Federal project, the construction of the WTG's, cable installation and scour protection is anticipated to resuspend sediments as a result of pile driving and cable installation. However, these impacts would be localized and temporary.

  According to the DEIS, the Project would have a maximum 39,690 gallons of coolants, 426,671 gallons of oils and lubricants, and 236,216 gallons of diesel stored within WTG foundations and OSSs according to the DEIS. BOEM anticipates that the risk of spills from any single offshore structure would be low, and any effects would be localized. Based upon modelling for an area near the Project (Maryland WEA), it is estimated that the most likely type of spill to occur during the life of a project is 90-440 gallons, which would have brief, localized impacts on water quality.

  Under a maximum-case accidental release scenario, there is a potential for moderate water quality impacts. However, the likelihood of such an event is low and therefore the most likely spill event would be small and of low frequency occurrence. As discussed within the DEIS, therefore, any overall impacts to water quality is expected to be short term, localized, and minor, resulting in little change to water quality. In addition, a Spill Prevention, Control, and Countermeasure Plan will be developed in accordance with all regulatory requirements and implemented during all phases of the project to minimize impacts to water quality.

- *Marine fish and fisheries.* For the State project, the work in State waters may directly marine fisheries, including the loss of access to transit areas and fishing grounds during construction, and loss of access to fishing grounds post-construction for mobile bottom gear fisheries. N.J.A.C.

7:7-16.2(b) discourages activities that would adversely impact the natural functioning of marine fish or New Jersey based marine fisheries. However, "Discouraged" is defined at N.J.A.C. 7:7-1.5 allows a proposed use if the use is determined by the Department to be in the public interest provided that mitigating or compensating measures can be undertaken so that there is a net gain in quality and quantity of the coastal resources of concern. As discussed throughout the environmental report accompanying the State permit, the overall project is in the public interest as the development will provide renewable, clean energy to New Jersey residents, will help negate climate change and its adverse effects on the coastal environment, such as sea level rise, and will increase resiliency within the State of New Jersey. The components of the State project are necessary for the delivery of clean wind energy to the residents of the State. Additionally, the siting of the components of the State project have been done to avoid adverse impacts to regulated marine resources to the maximum extent practicable.

In order to mitigate the potential impacts to marine fish and fisheries, the Applicant is currently coordinating with BOEM on a fisheries mitigation plan. Mitigation efforts outlined in the plan include implementation of an updated gear claim procedure to exist for the life of the project in the event of any damage to commercial fishing gear from the overall project, implementation of a direct compensation program for impacted fishermen existing for the life of the project, and creation of a navigational safety fund to enable eligible fishermen to acquire navigation equipment to navigate the Applicant's leased wind farm area. Furthermore, a MOU to be executed by the Department and Ocean Wind LLC will establish a Compensatory Mitigation Fund to compensate fishers for verifiable claims of negative impacts of a significant nature, including economic losses, caused by the Ocean Wind 1 offshore wind facility during its construction, operation and/or decommissioning. The Letter of Intent to execute the MOU was executed by the Department and Ocean Wind LLC on April 26, 2023. These mitigating measures will help alleviate impacts to New Jersey based marine fisheries.

In order to prevent any impacts to diadromous finfish spawning runs, a timing restriction will be implemented between March 1st and June 30th of each calendar year on sediment generating activities for work within state waters. Mitigation will be provided for the impacts to shellfish habitat for the installation of electric transmission cables within Barnegat Bay. Furthermore, BMPs will be implemented during project construction to limit turbidity and impacts to water quality in order to avoid adverse impacts to marine fish and their habitats.

For the Federal project, during operation, powered alternating current transmission cables would produce electromagnetic fields (EMF). To minimize EMF generated by cables, all cabling under the Proposed Action would include electric shielding. As discussed in the DEIS, the strength of the EMF increases with electrical current, but rapidly decreases with distance from the cable (Taormina et al. 2018). Ocean Wind LLC would also bury cables to a target burial depth of up to 4 to 6 feet (1.2 to 1.8 meters) below the surface, well below the aerobic sediment layer where most benthic infauna live. In some areas, it is anticipated that cable would be unable to be buried to the target depth and would instead be placed on or near the seafloor with overlying cable protection. Impacts of EMF are anticipated to be greater where this occurs, as the distance between the cable and biological receptors would be reduced.

As discussed in the DEIS, the available information suggests that benthic invertebrates with limited mobility would not be affected by Project-associated EMF (Exponent 2018). In the case of mobile species, an individual exposed to EMF would cease to be affected when it leaves the affected area. An individual may be affected more than once during long-distance movements; however, there is no information on whether previous exposure to EMF would influence the impacts of future exposure. Burrowing infauna and finfish may be exposed to stronger EMF, but little information is available regarding the potential consequences. Non-mobile infauna would be

unable to move to avoid EMF. Any effects, however, would be local and would not have population-level impacts due to the small spatial scale of the impact relative to the available benthic habitat in the geographic analysis area.

The DEIS also discusses that the population-level impacts on finfish have not been documented for EMF from alternating current cables (CSA Ocean Sciences Inc. and Exponent 2019) and that there is no evidence to indicate that EMF from undersea alternating current power cables adversely affects commercially and recreationally important fish species within the southern New England area (CSA Ocean Sciences Inc. and Exponent 2019). The DEIS reported on a more recent review by Gill and Desender (2020) that supports these findings, where fish were found to be affected by EMF at high intensity for a small number of individual finfish species; however, response in finfish was not found to occur at the EMF intensities associated with marine renewable energy projects. For example, behavioral impacts have been documented for benthic species such as skates near operating direct current cables (Hutchison et al. 2018, 2020). Skates exhibited changes in behavior in the form of increased exploratory searching and slower movement speeds near the EMF source, but EMFs did not appear to present a barrier to animal movement.

Therefore, BOEM expects localized and long-term, though not measurable, impacts on benthic resources from EMF from the project.

- *Dredging.* For the State project, a detailed review of the electric cable installations within State waters involving dredging activities was completed by the Division and detailed in the Division's dredging specialist's April 19, 2023 report, which is part of the State permitting record. The appropriate sampling and sediment characterization was or is required to be completed in accordance with the conditions of the State permit. Additionally, the most stringent BMPs are required to be utilized during cable installations to minimize turbidity, prevent sedimentation, and prevent contamination of areas outside of the specified work locations.

- *Air quality.* For the State project, as discussed in environmental report accompanying the State permit, a review of the application materials as well as supplemental information, including a summary of air pollution sources and an assessment of traffic, provided to the Department's Division of Air Quality ("DAQ") indicate that the construction of the State project components of the project, which include electric transmission cables and two (2) onshore substations, will not result in any significant impacts to ambient air quality and will not cause or contribute to an exceedance of ambient air quality standards at the work locations or in the surrounding areas.

  For the Federal project, offshore wind activities in the geographic analysis area would contribute to the emissions of criteria pollutants, VOCs, HAPs, and GHGs, mostly released during construction and decommissioning. Impacts would be minor because these emissions would incrementally increase ambient pollutant concentrations, though not by enough to cause a violation of the NAAQS or New Jersey AAQS. Pollutant emissions during operations would be generally lower and more transient. Most air pollutant emissions and air quality impacts would occur during multiple overlapping project construction phases from 2024 through 2030. BOEM concludes that overall, adverse air quality impacts from offshore wind projects are expected to be relatively small and transient. Offshore wind projects likely would lead to reduced emissions from fossil-fueled power generating facilities and consequently minor to moderate beneficial impacts on regional air quality after offshore wind projects are operational.

- *Maintenance and management of materials.* The project will include a comprehensive maintenance program, including preventive maintenance based on statutory requirements, original equipment manufacturers' guidelines, and industry best practices. Ocean Wind would

inspect WTGs, OSS, foundations, offshore export cables, inter-array cables, onshore export cables, and other parts of the project using methods appropriate for the location and element.

Lack of Assessment of Secondary & Tertiary Impacts

Comment

The section in the application on Secondary Impacts (7:7-14.3) is severely lacking. All land use and water use from this project should include the full scale and scope of port facility needs and uses, housing needs, school district needs, emergency services, to name a few. New Jersey and local communities will have to provide for these needs for the offshore wind industry to move forward at its current pace, scope, and scale. There are no transparent details of onshore development from this proposed project.

Response

For the Federal project, the offshore component is not anticipated to generate secondary impacts. The project does not result in the creation of any new housing units, commercial or retail space. Therefore, the offshore component of the project is not anticipated to have any secondary impacts such as traffic increases or increased recreational demand and will not induce further development. The offshore component of the project is outside of New Jersey's territorial waters and therefore is not included in the State Development and Redevelopment Plan.

For the State project, the installation of electric transmission cables and two (2) onshore substations are not anticipated to result in any secondary impacts. The project within state waters and onshore is not a transportation project or development of any wastewater treatment systems, which would require a secondary impact analysis per N.J.A.C. 7:7-14.3(b). The nature of the work within New Jersey State jurisdiction is similar to that seen with other utility installation projects. The proposed project is in compliance with the Critical Wildlife Habitats rule at N.J.A.C. 7:7-9.37, the Air Quality rule at N.J.A.C. 7:7-16.8, and the Traffic rule at N.J.A.C. 7:7-16.12 as discussed in detail in this report. The construction of the portion of the project proposed under this application will not result in the future construction of additional unregulated development. Accompanying infrastructure to allow for manufacturing and assembly of the turbines and maintenance of the offshore wind farm have or will undergo review for compliance with the applicable CZM Rules, FHA Rules, and FWW Rules under separate State permit applications. Furthermore, any temporary impacts as a result of construction of the project will be minor in nature. Restoration of temporarily disturbed areas is required as a condition of the State permit.

Lack of Decommissioning Plan

Comment

It is imperative for the NJDEP to have commitments from the applicants and/or their successor to account for their environmentally and economically responsible management of the inevitable disposal plan for blades and 98 turbines, as well as the miles of cables.

Response

The dismantling and removal of the turbine components (e.g., blades, nacelle, and tower) will largely be a "reverse installation" process subject to the same constraints as the original construction phase. Using today's technology, dismantling the turbine components requires a jack-up vessel to ensure adequate control of the demolition process and to manage the high lifts and high crane hook loads.

It is anticipated that the monopile foundations will be cut below the seabed level in accordance with standard practices at the time of demolition. The exact depth will depend on seabed conditions (e.g.,

dynamics and site characteristics) and developing industry best practices. The cutting process is likely to be via mechanical cutting, water-jet cutting, or other common industry practices.

If deployed, the scour protection placed around the base of each monopile will be left in situ as the default option in order to preserve the marine life that may have established itself on this substrate during the period of operation. If it is necessary to remove the scour protection, then the removal will proceed according to the best practices applicable at the time of decommissioning.

The offshore substation will be decommissioned by dismantling and removing its topside and foundation (substructure). As with the turbine components, this operation will be a reverse installation process subject to the same constraints as the original construction phase.

Offshore cables will either be left in place or removed, or a combination of both, depending on the regulatory requirements at the time of decommissioning. It is anticipated that the array cables will be removed using controlled flow excavation or a grapnel to lift them from the seabed. Alternatively, depending on available technology, a ROV may be used to cut the cable so that it can be recovered to the vessel. The export cables will be left in situ or wholly/partially removed. Any cable ends will be weighed down and buried if the cables are to be left in situ to ensure that the ends are not exposed or have the potential to become exposed post decommissioning. Cables may be left in situ in certain locations, such as pipeline crossings, to avoid unnecessary risk to the integrity of the third-party cable or pipeline. Offshore wind turbines have a large amount of material that must be removed after the structures are decommissioned. Disposal will be according to decommissioning industry best practices and the applicable regulations at the time of decommissioning. The appropriate waste hierarchy will also be followed: reuse is considered first and maximized when possible, followed by recycling, incineration with energy recovery, and lastly, disposal.

Onshore cables generally will be abandoned in place. Some components of the onshore electrical infrastructure may still have substantial life expectancies at the time of decommissioning. Hence, the potential reallocation of some or all of these assets may be investigated with PJM, the onshore grid operators. The future disposition of this infrastructure will depend in part on these discussions. Any cable ends will be buried if the cables are to be abandoned in situ to ensure that the ends are not exposed or have the potential to become exposed post-decommissioning. If buried cables are removed in most locations, they may be left in situ in certain specific locations such as road or railroad crossings to avoid unnecessary risk to the integrity of the surrounding infrastructure. Onshore cables installed overhead may either be used for other projects or be removed depending on the need at that time.

Lack of Reasonable Public Process

Comment

The three public hearings for this application were held virtually (two) and in-person (one). The in-person hearing was poorly located, and poorly attended. The location was dark, unlit, with no sign(s) directing where the public should enter. The public review process was scheduled during the busy holiday season to squeeze in public comments by the end of the year. There was a short timeframe for reviewing documents, and little information was provided by NJDEP at the public hearings.

In addition, this comment period occurred during other concurrent comment periods and public hearings for various offshore wind proposals, regulations, and permit processes, including hearings and deadlines for NJBPU's Third solicitation for more offshore wind and the Draft Environmental Impact Statement for Empire Wind 1 & 2 projects, numerous marine mammal and fisheries guidance documents, strategies for protecting marine mammals, and incidental harassment authorization and regulation requests.

Response

Due to the significant amount of public interest in the project and the scope of the project's environmental impact, the Division chose to hold three (3) public hearings in lieu of the typical 30 day public comment period required as part of the CAFRA permit application review process. As discussed at N.J.A.C. 7:7-26.5(b), the Department shall set the date, place and time of the public hearing within 15 calendar days after the date the Department declares a CAFRA Individual Permit application complete for the public hearing pursuant to N.J.A.C. 7:7-26.3(b), (c) or (d). In accordance with N.J.A.C. 7:7-26.3(b), the application was complete for the public hearing the date that the application was deemed administratively and technically complete, which was October 19, 2022. A letter, dated November 4, 2022, was sent to the Applicant outlining the established dates, times, and locations of the three (3) scheduled public hearings. The public hearings, per N.J.A.C. 7:7-26.5(b)1, are to be held no more than 60 calendar days after the application is declared complete for the public hearing. In this instance, the public hearings had to be held by December 17, 2023. To meet this timeframe as outlined in the CZM Rules, the three (3) public hearings were held as follows:

- Virtual public hearing held via Zoom on December 7, 2022 from 9 am to 12 noon.
- Virtual public hearing held via Zoom on December 12, 2022 from 5 pm to 8 pm.
- In-person public hearing held in the Performing Arts Center of Hammonton High School located in Hammonton, New Jersey on December 15, 2022 from 6 pm to 9pm. This location for the in-person public hearing was selected as based on availability, venue capacity, parking availability, and its proximity as a midway point between both cable landfall locations in Ocean County and Cape May County.

An overview of the project was provided at all three public hearings consisting of a visual presentation and information provided in the opening remarks for each hearing. Additionally, a fact sheet containing the project description and the Division's contacts for the application review was provided as a hand-out at the in-person public hearing.

As discussed above, the scheduling of the public hearings was based upon timeframes outlined in the Coastal Zone Management Rules. While numerous Federal, State, and local actions related to this project were occurring simultaneously with the review of the State permit application and Federal Consistency Certification application, the Division must adhere to the timeframes established by the Coastal Zone Management Rules.

All initially submitted State permit application materials were available for access by the public since the date of initial application submittal in August of 2022 through either an Open Public Records Act (OPRA) request, at the Berkeley, Lacey, Ocean, Upper Townships or Ocean City's municipal clerk's office, or via download from the Department's Offshore Wind webpage. The availability of the project information for approximately four months prior to the public hearings was sufficient time to allow for viewing by the public.

While the scheduled public hearings were only a requirement of the State project's CAFRA permit application review process, the Division accepted comments on all aspects of the project, including the portions of the project outside of CAFRA and State jurisdiction. It should also be noted that the Division allowed for and accepted public comments on the State permit application and Federal Consistency Certification application during the entire timeframe of the Division's review of these applications.

Shellfish Habitat & New Dredging

Comment

As per N.J.A.C. 7:7-9.2 Shellfish habitat, that habitat is designated as a special area. New dredging within shellfish habitat is prohibited.

Response

The CZM Rules at N.J.A.C. 7:7-12.21 Submerged cables, define submerged cables as underwater telecommunication cables, and shall include all associated structures in the water such as repeaters.

As per 7:7-12.7 New dredging, new dredging is the removal of sediment that does not meet the definition of maintenance dredging at N.J.A.C. 7:7-12.6 or the definition of environmental dredging at N.J.A.C. 7:7-12.8. The temporary or permanent displacement or removal of sediment for the purpose of installing submerged pipelines and cables is considered new dredging.

Further, per 7:7-12.15 Submerged pipelines, submerged pipelines (pipelines) are underwater pipelines which transmit liquids or gas, including crude oil, natural gas, water petroleum products or sewerage. Electric transmission lines are therefore not submerged pipelines.

The proposed project includes the installation of electric transmission cables, which by definition are not submerged cables. The shellfish habitat rule at N.J.A.C. 7:7-9.2 prohibits new dredging, with some limited exceptions as listed at 7:7-9.2(e). However, the installation of electric transmission cables by definition does not constitute new dredging and is therefore not a prohibited activity under the Shellfish Habitat rule.

Health/safety concerns

Comment

The locations where the electric transmission lines are proposed will present a health risk to the public. The structures proposed offshore represent potential targets from a security perspective. The proposed structures will have a negative impact upon residents' qualify of life. The turbines will produce low level noise which will adversely impact the public.

Response

The security of the offshore components of the project are not within the purview of the New Jersey Department of Environmental Protection. However, it is important to note that the Applicant has developed a confidential Emergency Response Plan and a confidential Safety Management Systems Plan as mentioned in their Construction and Operations Plan ("COP") provided to BOEM.

The locations of the electric transmission cables within State waters are located in areas where other utility and pipelines currently exist, making the lines compatible with existing development in these areas. Regarding onshore cables, the cables will be buried at a depth to minimize effects of EMF, which diminishes with distance and is similar to those from other existing sources, such as local distribution lines and devices commonly used in homes and businesses.

Where underwater and underground installation of cables occurs near beaches, fishing sites, and other areas of recreational activity, visitors may be exposed to EMF. Common household items including television sets, hair dryers, and electric drills can emit magnetic fields similar to or higher in intensity than those emitted by undersea power cables (CSA Ocean Sciences, Inc. and Exponent 2019). Based on typical EMF values from submarine cables buried at a depth of 3 feet (1 meter), maximum emissions directly above the onshore export cable would not exceed 165 milliGauss. From 10 to 25 feet (3 to 7.5 meters) away from the onshore export cable, emissions values drop to less than 0.1 to 12 milliGauss.

These values are below the reported human health reference levels of 2,000 and 9,040 milliGauss for the general population (Institute of Electrical and Electronics Engineers 2006; International Commission on Non-ionizing Radiation Protection 2010). Even if other offshore wind export cables were of higher voltage or buried closer to the surface, EMF levels are still anticipated to be well below the human health reference levels and, therefore, EMF impacts on human health are not anticipated.

The comment pertaining to quality of life impacts is highly subjective and personal to each individual. To the extent that impacts to human health and safety are evaluated in the Rules, the project complies and/or is consistent with those applicable Rules as referenced within the environmental reports prepared for both the Federal Consistency Certification and State permit application.

WTGs are known to produce ambient noise that barely exceeds ambient noise levels at 164 feet (50 meters) from the base of the WTG (Thomsen et al. 2015). The nearest WTG to land is 15 miles and therefore it is reasonably expected that the public will not hear any noise generated by the WTG's.

Risk of structural failure during storm events

Comment

The offshore components (turbines and substations) will not be able to withstand storm events such as hurricanes and nor'easters.

Response

Extratropical storms, including northeasters, are common in the Lease Area from October to April. These storms bring high winds and heavy precipitation, which can lead to severe flooding and storm surges. Hurricanes that travel along the coastline of the eastern U.S. have the potential to affect the Lease Area with high winds and severe flooding. On average, hurricanes occur every 3 to 4 years within 90 to 170 miles of the New Jersey Coast (Ocean Wind 2022). The return rate of hurricanes may become more frequent than the historical record, and the future probability of a major hurricane will likely be higher than the historical record of these events due to climate change. The engineering specifications of the WTGs and their ability to sufficiently withstand weather events is independently evaluated by a certified verification agent when reviewing the Facility Design Report and Fabrication and Installation Report according to international standards, which include withstanding hurricane-level events. One of these standards calls for the structure to be able to withstand a 50-year return interval event. An additional standard also includes withstanding 3-second gusts of a 500-year return interval event, which would correspond to Category 5 hurricane windspeeds. While highly unlikely, structural failure of a WTG (i.e., loss of a blade or tower collapse) would result in temporary hazards to navigation for all vessels. However as referenced above, the structures will be designed to international standards which include withstanding hurricane-level events.

Permitting process proceeds out of order

Comment

The Project's permitting approval process proceeds out of order without completed proper and required environmental studies or approvals for the NJDEP to make an informed decision. Specific unfinished, incomplete, or disputed approvals and studies for the Project include one or more from the following federal agencies and municipalities:

Bureau of Ocean Energy Management (BOEM) / National Environmental Policy Act (NEPA)
National Ocean Atmospheric Association (NOAA)
National Marine Fisheries Service (NMFS)

US Army Corps of Engineers (US ACE)
US Environmental Protection Agency (US EPA)
US Fish and Wildlife Service (USFWS)
US Coast Guard (USCG)
Ocean City, NJ
Cape May County, NJ

Response

The Department utilized information submitted in the COP, DEIS and the contents of the State permit application to analyze the project for compliance with the CZM Rules, FWW Rules and FHA Rules, with the results as detailed within the environmental reports prepared for both the State permit and Federal Consistency Certification. Compliance with BOEM's Record of Decision ("ROD"), including required mitigation measures will be required, as well as compliance with the conditions listed in the State permit. Standard Permit Condition #3 in the State permit requires the permittee to obtain any and all other necessary Federal, State and local approvals. Therefore, if any of the above governmental entities has regulatory jurisdiction over the project, an appropriate approval is required to be obtained prior to construction of the project within that entity's jurisdiction.

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