New Jersey Department of Environmental Protection (NJDEP)

Division of Land Resource Protection (Division)

Atlantic Shores Offshore Wind LLC (now known as Atlantic Shores Offshore Wind Project 1, LLC and Atlantic Shores Offshore Wind Project 2, LLC) Federal Consistency Certification

RESPONSE TO COMMENTS

File No. 0000-21-0022.1, CDT210001 FEDERAL CONSISTENCY CERTIFICATION

The applicant, Atlantic Shores Offshore Wind LLC (Atlantic Shores) proposes the construction, operation, maintenance, and decommissioning of the Atlantic Shores South Project. The Atlantic Shores South Project is comprised of Project 1 and Project 2 (collectively, the "Projects"). The Projects consist of up to 200 wind turbine generators (WTGs), up to 10 offshore substations (OSSs), up to 1 permanent meteorological (met) tower, up to 4 temporary meteorological and oceanographic (metocean) buoys, interarray and interlink cables, and export cables that will be located in Federal offshore waters approximately 8.7 miles from the New Jersey shoreline within Bureau of Ocean Energy Management (BOEM) Lease Area OCS-A 0499 (Lease Area) as well as accompanying electric transmission cables from the Lease Area to two landfall points in Atlantic and Monmouth counties, respectively.

In addition to the work referenced above, the Projects will include export cable corridors within New Jersey State waters as well as two (2) onshore interconnection cable routes, two onshore substations, and a proposed operations and maintenance (O&M) facility in New Jersey.

On June 30, 2021, the New Jersey Board of Public Utilities (NJBPU) awarded Atlantic Shores an Offshore Renewable Energy Credit (OREC) allowance to deliver 1,509.6 megawatts (MW) of offshore renewable energy into the State of New Jersey from Project 1. Project 1 is located in a 54,175 acre (219.2 kilometer) southwestern portion of the Lease Area and consists of a minimum of 105 and a maximum of 136 WTGs, up to five (5) OSSs, inter-array and/or inter-link cables, one (1) met tower, and up to three temporary metocean buoys. Project 1 also includes an approximately 12 miles (19 kilometer) export cable corridor (ECC) to the landfall location in Atlantic City, New Jersey.

Project 2 is located in a 31,847 acre (128.9 kilometer) southeastern portion of the Lease Area and consists of a minimum of 64 and a maximum of 95 WTGs, up to five (5) OSSs, inter-array and/or inter-link cables, and one (1) temporary metocean buoy. Project 2 also includes an approximately 61 mile (98 kilometer) ECC to the landfall location in Sea Girt, New Jersey. At this time, Project 2 has not been awarded an OREC from the NJBPU.

A 16,102 acre (65.2 kilometer) overlap area exists between Project 1 and Project 2 and will include 31 WTGs and associated inter-array and/or inter-link cables and could be included as part of Project 1 or Project 2.

Although BOEM's authority under the Outer Continental Shelf Lands Act (OCSLA) only extends to authorization of activities on the outer continental shelf (OCS), BOEM's regulations (30 Code of Federal Regulations [C.F.R.] 585.620) require that the Construction and Operations Plan (COP) describes all planned facilities that the lessee would construct and use for the Projects, including onshore and support facilities and all anticipated easements. BOEM's

published Draft Environmental Impact Statement (DEIS) was prepared for the Projects in accordance with the requirements of the National Environmental Policy Act (NEPA) (42 United States Code [U.S.C.] 4321 et seq.) and implementing regulations (40C.F.R. Parts 1500 – 1508). The DEIS informs BOEM in deciding whether to approve, approve with modifications, or disapprove the COP (30 C.F.R. 585.628). The information presented in Atlantic Shores' COP, BOEM's DEIS, and information provided by NJDEP's subject matter experts in the appropriate fields was utilized to inform NJDEP's decision to approve the requested Federal Consistency Certification. It is important to note that Appendix G of the DEIS discusses Atlantic Shores proposed and BOEM-recommended mitigation and monitoring measures in order to avoid, minimize, and/or mitigate Projects' impacts on environmental resources. While some of the mitigation measures are discussed herein, the comprehensive list of proposed and/or recommended mitigation and monitoring measures can be found in Appendix G of the DEIS.

Pursuant to N.J.A.C. 7:7-1.2(b), the portions of the Projects which are the subject of the Federal Consistency Certification are not located within New Jersey's coastal zone, which in this location, is limited to those coastal waters of the State of New Jersey that extend from the mean high water line out to the three-geographical-mile limit of the New Jersey territorial sea. The Federal commissioning of the Projects is presumed to have a reasonably foreseeable effect on the uses or resources of New Jersey's coastal zone. Therefore, pursuant to N.J.A.C. 7:7-1.2(e), a review of those foreseeable effects is conducted under the Coastal Zone Management (CZM) Rules, N.J.A.C. 7:7-1.1 et seq.

The portions of the Projects within New Jersey's coastal zone are subject to Division review under the submitted State permit applications. The State permit application for Project 1 consists of a request for a CAFRA Individual Permit, a Waterfront Development Individual In-Water Permit, a Freshwater Wetlands Special Activity Transition Area Waiver for Linear Development, and a Freshwater Wetlands Letter of Interpretation-Line Verification pending under Division file #0000-21-0022.2 LUP240001 & LLI240001. The State permit application for Project 2 consists of a request for a Waterfront Development Individual In-Water Permit pending under Division file# 0000-21-0022.3 LUP240001. The State permit application for the proposed O&M Facility's bulkhead construction consists of a CAFRA Individual Permit, a Waterfront Development Individual In-Water Permit, and a Flood Hazard Area Verification, pending under Division file #0102-24-0001.1 LUP240001, The State permit application for the proposed O&M Facility, which includes a building and docks, consists of a CAFRA Individual Permit and Waterfront Development Individual In-Water Permit, pending under Division file #0102-24-0001.1 LUP240002 These applications are currently under review. Any comments received on the State permit applications will be addressed under separate cover at the time of a decision on those applications.

While the CZM Rules do not provide for a formal public comment period for Federal Consistency Certifications, Federal regulations at 15 C.F.R. 930.2 state that State management programs shall provide an opportunity for public participation in the State agency's review of a Federal agency's consistency determination or an applicant's or person's consistency certification. That opportunity for public participation is typically achieved when notice of receipt of a Federal Consistency request is published in the DEP Bulletin. However, given the public interest in the project, the Division has taken additional steps to include public participation throughout its review of the Federal Consistency Certification request, and has invited the public to comment on the Projects described in detail above three (3) separate times during the application review process. The initial public comment period commenced on

October 20, 2021, coincident with the notice of receipt of the Federal Consistency Certification request in the NJDEP Bulletin and remained open for 60 calendar days until December 18, 2021. A second public comment period was held subsequent to the release of the DEIS by BOEM, which commenced on June 1, 2023 and remained open for 30 calendar days until June 30, 2023. A third public comment period was held, which commenced on September 20, 2023 and remained open for 30 calendar days until October 19, 2023, since the NJDEP inadvertently omitted notice of the first and second public comment periods from the GovDelivery list serve. The Division has also continued to accept public comments received since October 20, 2023.

The Division received approximately 29 comments during review of this application, including comments from individual citizens, environmental groups, organized citizen groups, and coastal municipalities. Overall, the comments discussed similar concerns. The Division has grouped the concerns outlined in the received public comments into the below topics with corresponding responses. Any procedural questions posed to the Division during the review of the request for a Federal Consistency Certification were answered separately and individually by Division staff. 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 21 comments containing general objections to offshore wind projects and/or to the proposed Atlantic Shores Projects specifically. Those comments specifically identifying a topic or identifying a non-compliance issue with the CZM Rules have been included in the below discussion under the applicable topic(s).

General Support for Offshore Wind projects

The Division received approximately 3 comments containing general support for offshore wind projects and/or for the proposed Atlantic Shores Projects specifically. Those comments specifically identifying a topic under the CZM Rules have been included in the below discussion under the applicable topic(s).

Application Lacks Necessary Information and Data

Comment

The COP provided by Atlantic Shores, specifically Appendix 1-C titled "Coastal Zone Management Consistency Statement" does not contain the necessary data and information for the NJDEP to do a reasoned review of the Projects' consistency with the State's enforceable policies.

Response

The Division's review of the Federal Consistency Certification request included extensive review of the information submitted including the consistency statement, public comments received during review of the certification request, the COP, BOEM's DEIS, extensive internal coordination and review by numerous NJDEP programs which have expertise in specific scientific areas, and continued coordination with Atlantic Shores.

During the review of Atlantic Shores' Federal Consistency Certification request, information was continuously exchanged between the NJDEP and Atlantic Shores through participation in bi-weekly project meetings, as well as in direct communications between Atlantic Shores and NJDEP programs such as the Marine Resources Administration (MRA). Those communications along with a review of the Federal Consistency Certification request by NJDEP's subject matter experts informed the review comments provided to the Division regarding the Atlantic Shores Projects' consistency with the State's enforceable policies.

The information referenced above provided the NJDEP with the necessary information and data to determine the Federal Projects' consistency with the State's enforceable policies.

Throughout the review process, information on the Projects was continuously available via the Open Public Records Act ("OPRA") process from the NJDEP and posted on the NJDEP's Offshore Wind webpage for public viewing. Any comments received on the Federal Consistency Certification request during the review period and during the three (3) public comment periods held as described above were reviewed and evaluated, as discussed throughout this document, for applicable information regarding consistency with the State's enforceable policies.

As a result of the submitted information on the Projects and extensive communication described above, the Division was able to complete its review of the request and make a determination that the portion of the Projects within Federal waters is consistent with the enforceable policies of the New Jersey Coastal Zone Management Program (NJCMP), N.J.A.C. 7:7-1.1 et seq., (last amended on October 5, 2021). The analysis of how the Division reached this conclusion can be found with the accompanying Environmental Analysis Report prepared for the Federal Consistency Certification. As mentioned previously, the State permit applications for the Projects are pending and under review by the Division. The analysis of how the Division reaches any conclusions on the State permit applications will be contained within the environmental reports and any additional decision documents prepared for each respective application.

Procedural Flaws

Comment

It is premature for the NJDEP to consider Atlantic Shores' request for a Federal Consistency Certification concurrence because the final Federal environmental impact analysis does not yet exist.

Response

As a matter of background, the United States Congress authorized the Secretary of the Interior (Secretary) to grant OCS leases for renewable energy activities when it enacted the Energy Policy Act of 2005, which amended the OCSLA. The amendment authorized the Secretary to issue regulations to carry out the added subsection's grant of authority. The Secretary first delegated that authority to BOEM's predecessor, the Minerals Management Service (MMS). On April 29, 2009, MMS promulgated regulations for leasing and managing OCS renewable energy activities. On May 19, 2010, the Secretary signed Secretary's Order 3299, dividing MMS into three separate agencies: BOEM, the Bureau of Safety and Environmental Enforcement (BSEE), and the Office of Natural Resources Revenue (ONRR).

Amendment 2 of Secretary's Order 3299 assigned BOEM all renewable energy related management functions—including resource evaluation, planning, leasing, and safety and

environmental enforcement functions—until the ‘‘Assistant Secretary—Land and Minerals Management determines that an increase in activity justifies transferring the inspection and enforcement functions to BSEE. On October 18, 2011, BOEM’s regulations were codified at 30 C.F.R. chapter V, and its renewable energy regulations were, and remain located in 30 C.F.R. part 585.

Under these current regulations, the Coastal Zone Management Act (CZMA) review period starts at the date BOEM issues the notice of intent to publish a draft NEPA analysis or DEIS and/or when the offshore wind developer voluntarily submits a Federal Consistency Certification request to the State. In this instance, the review period for this Federal Consistency Certification request coincided with the voluntary submission of the Federal Consistency Certification request and issuance of BOEM’s Notice of Intent to Publish a DEIS on September 30, 2021. In order to allow additional time to review the submitted COP, for BOEM to publish the DEIS, and for the public to review and comment on both the submitted COP and published DEIS, numerous stays were executed to extend the NJDEP six-month consistency review period consistent with 15 C.F.R.§ 930.60(b).

The NJDEP has been working with Atlantic Shores and BOEM to address the Projects’ 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 Atlantic Shores’ environmental review process, which provided the Department advanced access to the preliminary Final Environmental Impact Statement (FEIS). Therefore, the NJDEP did have an opportunity to review the preliminary version of the FEIS. While the FEIS is not final or public yet, it can be assumed that, at a minimum, the mitigation measures and conditions outlined in the preliminary FEIS will be incorporated into BOEM’s Record of Decision (ROD) and COP approval.

The NJDEP, in accordance with the above referenced review timeline, carefully reviewed and utilized the information submitted in the consistency statement, the COP, and BOEM’s DEIS to analyze the portion of the Projects in Federal waters for consistency with the State’s enforceable policies, with the results detailed within the Environmental Analysis Report prepared for and accompanying the Federal Consistency Certification. Compliance with BOEM’s ROD and COP approval, including necessary mitigation measures will be required. Therefore, the NJDEP had access to all of the necessary information to conclude that the portion of the Projects in Federal waters are consistent with the State’s enforceable policies.

Transmission Options

Comment

NJDEP should consider the fact that there is an ongoing competitive transmission process that could materially impact the design of the proposed Atlantic Shores transmission generation tie.

Response

By way of background, on November 18, 2020, New Jersey integrated its offshore wind transmission objectives with the regional grid’s planning and development process. In

furtherance of the State’s offshore wind goals, the NJBPU formally requested inclusion of its offshore wind public policy into PJM’s regional transmission expansion analysis through the State Agreement Approach (SAA). Per NJPBU, the SAA process is a competitive transmission

solicitation process, underscoring New Jersey's commitment to the development of offshore wind generation. This approach will not only enhance the State's offshore wind program, but increasing competition in this way also reduces costs, provides savings for consumers, reduces risk, spurs innovation, and significantly reduces the environmental footprint of new transmission lines. In response to the SAA solicitation, transmission developers submitted 80 unique, competitive, ready-to-build designs seeking to integrate New Jersey's offshore wind resources into the PJM system. On October 26, 2022, through NJBPU Order Docket No. QO20100630, the NJBPU awarded a series of projects to construct the onshore transmission facilities necessary to successfully deliver electricity generated by offshore wind to New Jersey customers. The awards include a variety of projects needed to strengthen the regional and near-shore transmission grids, including the identification of a preferred point of interconnection (POI) for future offshore wind projects off the coast of New Jersey. Specifically, the order awarded Mid-Atlantic Offshore Development, LLC's (MAOD) and Jersey Central Power & Light Company's (JCP&L) jointly submitted Larrabee Tri-Collector Solution for New Jersey's inaugural offshore wind coordinated transmission solution under PJM's SAA. In addition, the NJPBU selected a number of projects that will upgrade the PJM system to accommodate New Jersey's offshore wind goals. As stated in the order, after a thorough evaluation, the Larrabee Tri-Collector Solution and upgrades to the larger PJM transmission grid were determined to best meet New Jersey's stated SAA goals of reducing community disruption, environmental impacts, and customer costs, while minimizing risks. The order goes on to say that the Larrabee Tri-Collector Solution results in an innovative transmission solution, creating a single onshore POI while leveraging existing rights of ways, an outcome that would not have been possible without coordinated planning and a competitive solicitation.

The connection to the Cardiff substation from Project 1 was awarded as part of NJBPU's second offshore wind solicitation on June 30, 2021, prior to the SAA executed by PJM and the NJBPU and approved by the Federal Energy Regulatory Commission (FERC) on February 16, 2021. Under the NJBPU's first and second offshore wind solicitations, which included Project 1, a bundled approach to generation and transmission was considered where each project would individually develop and construct its own transmission facilities to bring electricity onshore from its own offshore wind turbines. Therefore, NJBPU could not direct the connection point for Project 1 and remains as awarded under NJBPU's second solicitation.

As part of the SAA project awards described above, the NJPBU described the benefits of the Prebuild, which is the infrastructure between the identified landing point at Sea Girt National Guard Training Center (NGTC) and the POI with the PJM high-voltage electric grid, the Larrabee Collector Station, enabling 3,742 MW of offshore wind generation needed to reach the then-current goal of 7,500 MW of OSW by 2035 per Executive Order 92 to be connected to the grid. The NJBPU explained that the Prebuild envisioned a single construction effort to install the necessary duct banks and associated access cable vaults to house transmission conduits for future use of up to four (4) offshore wind qualified projects, thereby enabling these projects to access the wholesale transmission system. The SAA award order contemplated the Prebuild being procured as part of NJBPU's third offshore wind solicitation. However, NJBPU has decided to pursue the Prebuild as a separate solicitation. The award of the Prebuild is anticipated in quarter three of 2024.

As per BOEM's requirements, the submitted COP was required to contain all proposed activities and planned facilities, which included the proposed interconnection to the Cardiff substation from Project 1 and the Larabee substation from Project 2. However, the NJDEP

acknowledges that there is an ongoing competitive transmission process that could impact the design of the Atlantic Shores transmission generation tie outlined in the COP for Project 2. The issued SAA discussed above has the potential to modify the onshore cable route, as part of the Prebuild solicitation described above, from Project 2 to the Larabee substation. As the onshore route will be within the State's jurisdictional limits, the entity awarded the Prebuild solicitation by NJBPU will be required to apply to the Division for the appropriate State permits. Consistency with the State's applicable CZM Rules at N.J.A.C. 7:7, Flood Hazard Area Control Act (FHACA) Rules at N.J.A.C. 7:13, Freshwater Wetlands Protection Act (FWPA) Rules at N.J.A.C. 7:7A, and Stormwater Management Rules at N.J.A.C. 7:8 will be determined during the review of the State permit application.

Environmental Justice

Comment

The Atlantic Shores Projects are just the kind of facilities that the Environmental Justice Law was designed to regulate. NJDEP has the authority to deny the request for a Federal Consistency Certification if the Projects cannot avoid "disproportionate impacts on overburdened communities (OBCs) or serve compelling public interest."

Response

In 2018, New Jersey's Governor Murphy issued Executive Order 23 which directed all state executive branch agencies to begin incorporating the principles of environmental justice into their policies and decision-making procedures. To further this initiative, in September of 2020, Governor Murphy signed New Jersey's Environmental Justice Law (N.J.S.A. 13:1D-157 et seq.). The Environmental Justice Law recognizes that existing environmental standards are often formulated based on the effect that pollution has upon general populations spread over wide geographic areas, which may fail to fully consider localized impacts and impact a community's right to live, work, learn, and recreate in a clean and healthy environment. The NJDEP now must consider how certain facilities seeking permits to construct and/or operate in OBCs will contribute to environmental or public health stressors in that community in a manner that is disproportionate compared to its neighbors.

Following the enactment of the Environmental Justice Law, the NJDEP adopted the Environmental Justice Rules, N.J.A.C. 7:1C which were published in the New Jersey Register on April 17, 2023. The Environmental Justice Rules establish the specific requirements and procedures that applicants must follow when seeking permits for certain pollution-generating facilities located, or proposed to be located, in OBCs. This includes identification of relevant environmental and public health stressors, the requirements for the preparation of an environmental justice impact statement to assess a facility's impacts to existing stressors, the procedures to ensure meaningful public participation by members of the host community and the standard of NJDEP review and form of decision.

The Environmental Justice Rules apply where three specific criteria are present: 1) the proposed new or existing facility is one of eight specific facility types identified in the Rules, 2) the applicant seeks an individual permit under applicable NJDEP statutes (see N.J.S.A. 13:1D-158), and 3) the facility is located or proposed to be located, in whole, in part in (or, in certain limited circumstances, immediately adjacent to) an OBC In regards to the applicability of the requirements of the Environmental Justice Rules to the Projects, the Projects do not meet all three

of the criteria referenced above. As mentioned previously in this document, the Federal Consistency Certification request only applies to the portion of the Projects in Federal waters. Therefore, the Projects are not located in one of New Jersey's OBCs as required by the Rules. In addition, the portion of the Projects in Federal waters do not require an individual permit from the Division or any other division/program within NJDEP. Finally, the Projects are not one the specific eight facility types identified in the Rules (N.J.A.C. 7:1C-5). Therefore, the requirements of the Environmental Justice Law and implementing Environmental Justice Rules are not applicable to the portion of the Projects proposed under the request for a Federal Consistency Certification.

Federal Consistency Certification Request Voluntary Submission

Comment

BOEM/Atlantic Shores is required to provide a Federal Consistency Certification for the full Atlantic Shores Projects and such compliance is not merely "voluntary".

Response

The CZMA's 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 Zone Management Program (CZMP).

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 C.F.R. part 930, subparts A, B and E. Offshore wind development projects located in Federal waters fall within this category of Federal action. Therefore, the Division reviews development for consistency with CZMP's 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 the National Oceanic and Atmospheric Administration (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 unlisted Federal activity that the State intends to review under the CZMA that is located within Federal waters is considered an unlisted activity subject to the process set forth at 15 C.F.R. 930.54, which governs unlisted Federal activity review. However, if the State requests and is granted review authority or the non-Federal entity voluntarily submits a request for a Consistency Certification to the NJCMP, the State has the authority to review the activity.

In this instance, Atlantic Shores agreed to and voluntarily submitted a request for a Federal Consistency Certification to the NJDEP as part of the Federal permitting process, thereby subjecting the proposed offshore wind energy Projects to review under the Federal consistency provision of the CZMA. This voluntary submission by Atlantic Shores ensures the NJCMP's enforceable policies are fully considered in the Projects' designs without the need for changes to the NJCMP's Federal consistency listings and development of a GLD.

Conflict of Interest

Comment

The NJDEP is conflicted, acting as both a vocal promoter of offshore wind and its environmental regulator.

Response

State law charges the NJDEP with recommending measures to reduce greenhouse gas emissions, including those associated with the production of energy. State law also charges the NJDEP with protecting New Jersey's natural and historic resources, including those within the State's coastal area. These legislatively assigned obligations are not in conflict, and the NJDEP's execution of these laws is complementary in nature.

The New Jersey Global Warming Response Act, N.J.S.A. 26:2C-38 et seq. (GWRA), first enacted in 2007 and amended in 2019 to enhance the State's response to climate change, established a fixed goal of reducing statewide greenhouse gas emissions to eighty percent below 2006 levels by the year 2050. The GWRA also directed the NJDEP to routinely report upon and recommend measures to reduce greenhouse gas emissions, including greenhouse gases from the production, processing, distribution, transmission, storage, or use of energy. As described in the latest GWRA report, to reduce greenhouse gas emissions as required by state law, electric generation must be fully decarbonized by 2050, which requires a dramatic increase in the state's renewable power supply (NJDEP 2020). In this respect, the responsible development of renewable offshore wind energy facilities is critical to achieving the goal prescribed by the Legislature.

While the NJDEP recognizes that deep, rapid reductions in greenhouse gas emissions, including through the deployment of clean energy facilities, are necessary to meet GWRA statutory requirements and avoid even more drastic climate change damage to New Jersey communities and its economy, the state's climate goals are separate from and have no bearing upon the NJDEP's independent obligations under the litany of environmental protection laws the NJDEP is charged with executing. The NJDEP's requirements under multiple statutes (including, but not limited to, the Waterfront Development Act, Wetlands Act of 1970, Coastal Area Facility Review Act (CAFRA), Freshwater Wetlands Protection Act, and the State's enforceable policies under the Federal CZMA apply in full force to proposed offshore wind facilities. As it would

with respect to any other regulated activity, the NJDEP reviews offshore wind projects for compliance with all applicable laws, regulations, and enforceable policies. Regarding the Atlantic Shores Federal Consistency Certification, the NJDEP, through the Division undertook its characteristic detailed and technical review of the proposed Projects utilizing known and available information and expertise from relevant NJDEP resource programs prior to determining the Projects in Federal waters are consistent with the State's enforceable policies. This determination is not based upon the clean energy policy concerns of the GWRA, but rather upon on strict application of New Jersey's relevant and applicable environmental protection laws as explained

above. The Division's comprehensive review of the Projects' potential environmental impacts and its ultimate findings are detailed in the Environmental Analysis Report that accompany the Division's Federal Consistency Certification.

The NJDEP notes that eight municipalities have petitioned the New Jersey Superior Court for an order that would require an Administrative Law Judge to review Atlantic Shores' Federal Consistency Certification request in an adjudicatory hearing and issue an initial decision before the NJDEP renders its Federal Consistency Certification determination. The municipalities claim that this relief, which is not supported by the law, is needed because the NJDEP is biased in favor of offshore wind development. The NJDEP has opposed the requested order and filed a motion to dismiss the municipalities' case. On March 28, 2024, the court granted DEP's motion to dismiss and dismissed the case and order to show cause on jurisdictional grounds. The NJDEP notes that were it to fail to render its Federal Consistency Certification determination by April 1, 2024, the Projects would likely be automatically deemed consistent with New Jersey's enforceable policies pursuant to 15 C.F.R. § 930.78(b), and such automatic determination may not have accounted for the Division's detailed review of potential environmental impacts.

Inconsistency with the Goals of the NJCMP and the CZM Rules

Comment

A review of the Atlantic Shores' COP and BOEM's DEIS indicates that the goals of the NJCMP and the CZM Rules at N.J.A.C. 7:7-1.1(c) are not met.

Response

The CZM Rules at N.J.A.C. 7:7-1.1(c) lay out eight broad coastal goals that the Rules strive to attain: 1) healthy coastal ecosystems, 2) effective management of ocean and estuarine resources, 3) meaningful public access, 4) sustained and revitalized water-dependent uses, 5) coastal open space, 6) safe, healthy, and well-planned coastal communities and regions, 7) coordinated coastal decision making, comprehensive planning, and research, and 8) coordinated public education and outreach. Each goal is supplemented by related policies that set forth the means to realize that goal.

N.J.A.C. 7:7-1.1(e) states that the broad goals outlined in 1.1(c) are implemented through the location rules (N.J.A.C 7:7-9 through 14), use rules (N.J.A.C. 7:7-15), and resource rules (N.J.A.C. 7:7-16). The Environmental Analysis Report accompanying the Federal Consistency Certification addresses the Projects' consistency with all relevant rules within these sections, thus determining the Projects' consistency with the broader goals of the CZM Rules.

Further, N.J.A.C. 7:7-1.1(d) states that the CZM Rules seek to strike a balance between conflicting and competing local, State, and national interests in coastal resources and in uses of coastal locations. The Environmental Analysis Report accompanying the Federal Consistency Certification discusses balancing environmental protection with the proposed Projects that are in the public interest.

To summarize, as discussed throughout this document as well as detailed in the Environmental Analysis Report accompanying the Federal Consistency Certification, the Projects are consistent with the State's enforceable coastal zone policies. The information reviewed by the Division during its review of the Federal Consistency Certification request included extensive

review of the consistency statement, public comments received during the review of the certification request, the COP, BOEM's DEIS, extensive internal coordination and review by numerous NJDEP programs which have expertise in specific scientific areas, and continued coordination with Atlantic Shores. Compliance with the requirements of BOEM's ROD and COP approval, including all applicable mitigation measures, will be required and further confirms the Projects' consistency with the State CZMP's enforceable policies.

Projects are inconsistent with the requirements of the Coastal Zone Management Rules, N.J.A.C. 7:7-1.1 et seq.

Comment

The Atlantic Shores Projects 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. The Atlantic Shores Projects are inconsistent with several CZM Rules; specifically, N.J.A.C. 7:7-9.2 Shellfish habitat, 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. 7:7-9.22 Beaches, N.J.A.C. 7:7-9.34 Historic and archaeological resources, N.J.A.C. 7:7-9.36 Endangered or threatened wildlife or plant species habitats, N.J.A.C. 7:7-9.37 Critical wildlife habitat, N.J.A.C. 7:7-9.38 Public open space, N.J.A.C. 7:7-9.41 Special urban areas, N.J.A.C. 7:7-9.48 Public trust rights, N.J.A.C. 7:7-11.2 Standards for conducting endangered or threatened wildlife or plant species habitat impact assessment, N.J.A.C. 7:7-12.21 Submerged cables, N.J.A.C. 7:7-12.24 Miscellaneous uses, N.J.A.C. 7:7-14.2 Basic location rule, N.J.A.C. 7:7-14.3 Secondary Impacts, N.J.A.C. 7:7-15.3 Resort/recreational, N.J.A.C. 7:7-15.4 Energy facility, N.J.A.C. 7:7-15.7 Industry, N.J.A.C. 7:7-16.2 Marine fish and fisheries, N.J.A.C. 7:7-16.3 Water quality, N.J.A.C. 7:7-16.9 Public access, N.J.A.C. 7:7-16.10 Scenic resources and design, N.J.A.C. 7:7-16.11 Buffers and compatibility of uses, N.J.A.C. 7:7-16.12 Traffic, and N.J.A.C. 7:7-17 Mitigation.

Response

The Environmental Analysis Report prepared by NJDEP and accompanying the Federal Consistency Certification along with information contained within this comment response document details how the components of the Projects within Federal waters are consistent with all applicable CZM regulations, including some of those referenced above. It should be noted that policies not applicable to the portion of the Projects in Federal waters may or may not be discussed in the Environmental Analysis Report.

The Division's review of the Projects included information submitted by Atlantic Shores within the consistency statement, the COP, and 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. Any required mitigation measures necessary for the Projects' consistency with the State's enforceable policies will be included as part of BOEM's ROD and COP approval. With adherence to the agreed upon items as referenced within the Federal Consistency Certification, the components of the Projects within Federal waters meet the requirements of, and are consistent with, all applicable CZM regulations. Compliance with the applicable CZM Rules, FHA Rules, FWW Rules, and SWM Rules for the portion of the Projects in State waters and onshore will be discussed in the decision documents accompanying the currently pending State permit applications.

CZM Rule Consistency Assessment

Comment

The NJDEP needs to provide an assessment to the public of whether the project is consistent with the provisions of the following rules: Energy facility at N.J.A.C. 7:7-15.4(b)1, Surf clam areas at N.J.A.C. 7:7-9.3, Prime fishing areas at N.J.A.C. 7:7-9.4, Finfish migratory pathways at N.J.A.C. 7:7-9.5, Endangered or threatened wildlife or plant species habitat at N.J.A.C. 7:7-9.36, Critical wildlife habitat at N.J.A.C. 7:7-9.37, Public open space at N.J.A.C. 7:7-9.38, Land and waters subject to public trust rights at N.J.A.C. 7:7-9.48, Miscellaneous uses at N.J.A.C. 7:7-12.24(b), Marine fish and fisheries at N.J.A.C. 16.2(b), and Buffers and compatibility of uses at N.J.A.C. 7:7-16.11.

Response

A detailed analysis of how the portion of the Projects located in Federal waters is consistent with any of the applicable above referenced CZM Rules can be found in the Environmental Analysis Report accompanying the Federal Consistency Certification. Additionally, a discussion of consistency with some of the above-mentioned CZM Rules can be found throughout this document. A detailed analysis of whether and how the portion of the Projects located in State waters and onshore complies with the applicable CZM Rules, FHA Rules, FWW Rules, and SWM Rules will be discussed in the documents accompanying decisions on the currently pending State permit applications.

Impacts to Commercial Fishing

Comment

The Atlantic Shores Projects will negatively impact the commercial fishing industry.

Response

The Marine Fish and Fisheries rule at N.J.A.C. 7:7-16.2(b) states that any activity that would adversely impact the natural functioning of marine fish and any New Jersey based marine fisheries or access thereto is discouraged. Discouraged coastal development, as defined in the CZM Rules at N.J.A.C. 7:7-1.5, allows for uses that the NJDEP considers to be in the public interest provided mitigating or compensating measures can be taken so that there is a net gain in quality and quantity of the coastal resource of concern. This section of this document only discusses impacts to New Jersey based marine fisheries.

As discussed in detail in the Project Public Interest section of the Environmental Analysis Report accompanying the decision on the Federal Consistency Certification request, the Projects are in the public interest of the State of New Jersey as well as in the regional and national public interest. Furthermore, mitigating and/or compensating measures will be implemented in order to minimize impacts to the commercial fishing industry.

Atlantic Shores acknowledges in its COP that the waters off the coast of New Jersey are used by a variety of commercial fisherman, and they are committed to ensuring the coexistence with commercial fisherman within the wine turbine area (WTA). The DEIS acknowledges that commercial fisheries provide economic benefits to the coastal communities of New England and

the mid-Atlantic region, including New Jersey, by contributing to the income of vessel crews and owners and by creating demand for dockside services to process seafood products and maintain vessels.

The COP acknowledges that the installation and maintenance of new structures and cables within the WTA and within the proposed cable corridors may cause temporary disruptions to commercial and for-hire recreational fishing activities. The DEIS indicates that commercial fishing efforts in the Project 1 and Project 2 WTA vary among species, fishing ports, and fishing gear types. However, the DEIS acknowledges that the presence of the structures within the Projects' WTA, the installation and presence of cables, noise generation, and increased vessel traffic and anchoring will likely impact commercial fishing, both short-term and long-term. The DEIS also references that the Projects could include long-term, minor beneficial impacts for some for-hire recreational fishing operations because of the artificial reef effect.

With regard to the presence of structures, they would pose a long-term navigational hazard and risk of allisions to commercial fishing vessels transiting through and fishing near the WTA. The presence of structures, particularly the export and inter-array cables and associated scour protection, would pose an increased risk of damage or loss of fishing gear. Mobile gear could become snagged on these cable protection structures, resulting in damage to or loss of the gear, increased costs to fishermen associated with repairing or replacing the gear, and revenue loss while the gear is being repaired or replaced.

The DEIS expects that increased vessel traffic associated with the construction, operation, maintenance, and decommissioning of the Projects would cause long-term, localized, moderate impacts on commercial fisheries. Minor impacts are assumed due to anchoring of vessels. Cable emplacement could prevent deployment of fixed and mobile fishing gear in limited parts of the Projects' area from 1 day up to several months (if simultaneous lay and burial techniques are not used). During construction and installation activities, it may not be possible to deploy fixed fishing gear in parts of the Projects' area, which may result in the loss of revenue to fisheries. However, navigational impacts from the presence of cable installation vessels are expected to be on the scale of hours and are not expected to occur over large areas. BOEM expects that cable emplacement and maintenance associated with the Projects would result in short-term, localized, minor impacts on commercial and for-hire recreational fisheries.

Additionally, the DEIS indicates that underwater noise would be generated during geotechnical and geophysical surveys, pile driving, cable emplacement, vessel operation, and WTG operation. These noise sources have the potential to temporarily affect fish and shellfish, which may indirectly affect commercial and for-hire recreational fisheries. BOEM expects that underwater noise associated with the Projects would cause short-term to long-term, localized, minor to moderate impacts on commercial and for-hire recreational fisheries.

The COP describes in detail the sources, uses, limitations, and geographic extent of commercial fishing data used to support the assessment of commercial fishing in the area of the Projects. Utilizing this information, the COP outlines measures, described below, that Atlantic Shores has or will implement in order to avoid, minimize, or mitigate potential effects to commercial fishing during construction, operation, maintenance, and decommissioning of the Projects. Some of these measures are summarized below.

To begin, the Projects minimize effects to commercial and for-hire recreational fishing by using a layout that will facilitate ongoing transit and fishing activities by these vessels. The layout was developed in coordination with the surf clam/quahog dredging fleet, which is the predominant commercial fishery within the WTA. Although vessel maneuverability within the WTA depends on many factors (including vessel size, fishing gear or method used, and weather conditions), the proposed layout is expected to accommodate fishing patterns observed in the WTA as shared with Atlantic Shores by the surf clam industry. However, to facilitate safe navigation, all offshore structures will include appropriate marine navigation lighting and marking in accordance with United States Coast Guard (USCG) and BOEM guidance. Atlantic Shores will continue to work with USCG and BOEM to determine the appropriate marine lighting and marking schemes for the proposed offshore facilities. Additionally, the proposed cable burial depth ranging between 5 feet to 6.6 feet (1.5 to 2 meters) was based upon the completion of a cable burial risk assessment which considered anchor use and commercial fishing practices.

In order to minimize the effects of the Projects on commercial fishing during operation and maintenance activities, when necessary, temporary safety zones will be established around maintenance vessels and activities. The effects of the Projects on commercial fishing during decommissioning is expected to be similar to those experienced during construction activities.

To minimize the Projects' potential effects to commercial and for-hire recreational fishing from increased vessel traffic, Atlantic Shores will establish a Marine Coordinator who will monitor daily vessel movements, implement communication protocols with external vessels both in port and offshore to avoid conflicts, and monitor safety zones. Communications will begin prior to construction and will continue throughout the construction process. Daily coordination meetings between contractors are expected to be held to avoid conflicting operations at port facilities and transit routes to the WTA. To provide construction zone control, the Marine Coordinator will employ radio communications and safety vessels to address any vessels entering the construction zone.

Atlantic Shores has developed a Gear Loss Avoidance Program to avoid fishing gear loss at all phases of the Projects. This includes direct outreach by the Fisheries Liaison Officer, described below, to fisherman and use of scout boats operated by local fishermen to identify fishing gear located within areas of the Projects. Once the gear is identified, Atlantic Shores will avoid the identified fishing gear or work with fishermen to remove or relocate the gear. This plan also allows for agreements to temporarily delay activities related to the Projects until fishing is completed. Lastly, in the unlikely event that gear is lost or damaged, a gear loss form and policy has been developed. This Program was implemented during the two years of surveying the area and has successfully utilized the Program to minimize interactions with fishing gear by

adjusting survey plans to avoid areas of active fishing, communicating with fishermen to remove gear prior to Atlantic Shores's temporary survey activities, and mitigating gear loss.

Atlantic Shores has developed a detailed Fisheries Communication Plan, which is included in the submitted COP, and hired a Fisheries Liaison Officer from the commercial fishing industry in order to engage and solicit input from the commercial fishing industry regarding potential Projects-related effects. The COP indicates that the primary responsibility of the Fisheries Liaison Officer will be to communicate the issues and concerns raised by the fishing community directly to Atlantic Shores. Additionally, Atlantic Shores has explained it is working to find ways to integrate both the skills and infrastructure of the local fishing community into the Projects through

early economic opportunities and is already employing local fishermen and their facilities for scouting and dock-side vessel support.

As part of its outreach to the affected community, Atlantic Shores maintains a "For Mariners" webpage, distributes updates on Atlantic Shores' activities (via an email distribution list, print and online industry publications, and local news outlets), coordinates with the USCG to issue Notices to Mariners and attends fishing conferences, trade shows, and tournaments. Atlantic Shores has indicated that it will continue to hold and attend meetings with local fishermen, professional associations/organizations representing commercial and recreational fishermen, and local offshore fishing clubs during the lifetime of the Projects. Atlantic Shores also notes that they will also continue to participate in Fisheries Management Council meetings, university-sponsored activities (e.g., webinars held by Rutgers New Jersey Cooperative Extension), and regional efforts led by BOEM, NOAA, and the commercial fishing industry (including the Responsible Offshore Development Alliance (RODA) and the Responsible Offshore Science Alliance (ROSA)).

Atlantic Shores, as indicated in its COP, has also agreed to establish a compensation/mitigation fund (Fund) consistent with BOEM's draft Guidance for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 C.F.R. 585 (Guidance) to compensate commercial and for-hire recreational fishermen for loss of income due to unrecovered economic activity resulting from displacement from fishing grounds due to project construction and operations and to shoreside businesses for losses indirectly related to the Projects. For losses to commercial and for-hire recreational fishermen, the Fund will be based on the revenue exposure for fisheries based out of ports listed in Table 3.6.1-15 of the DEIS. For losses to shoreside businesses, the Atlantic Shores will analyze the impacts on shoreside seafood businesses adjacent to ports listed in Table 3.6.1-15 of the DEIS. The shoreside business impacts may include but are not limited to: fishing gear suppliers and repair services; vessel fuel and maintenance services; ice and bait suppliers; seafood processors and dealers; and wholesale distributors.

Further, a Memorandum of Understanding (MOU) to be executed by the NJDEP and Atlantic Shores will establish a Compensatory Mitigation Fund to compensate fishermen for verifiable claims of negative impacts of a significant nature, including economic losses, caused by Projects 1 and 2 during their construction, operation, maintenance, and/or decommissioning. The Letter of Intent to execute the MOU was executed by the Department and Atlantic Shores Offshore Wind Project 1, LLC and Atlantic Shores Offshore Wind Project 2, LLC on April 1, 2024.

The DEIS has also outlined mitigation measures that can and would likely be implemented to mitigate the effects to commercial fisheries described above. These include cable monitoring to ensure cables remain buried to appropriate depths to reduce the risk of interactions with fishing gear, incident reporting for damage from gear interactions, anchor strikes, and vessel allisions to ensure adequate compensation is provided, and establishment of a compensation/mitigation fund to mitigate economic impacts of the Projects on commercial fisheries. Furthermore, NJDEP has received concurrence from Atlantic Shores that they to include cable protection measures (such as concrete mattresses with tapered edges) that better reflect pre-existing conditions, to the maximum extent practicable As stated in Atlantic Shores' COP Volume II, Section 7.4.4.3, cable protection measures will be designed to minimize effects to fishing gear to the maximum extent practicable and fishermen will be informed of the areas where cable protection is installed. Furthermore, to reduce the risk of interactions with fishing gear or anchors, Atlantic Shores will provide the

physical locations of all cable protection installed during the Projects' construction. Atlantic Shores will also work with industry groups to determine ways to share information with NOAA and fisheries stakeholders.

Views/Viewshed:
Comment

The construction of the Atlantic Shores Projects will impact existing views of the ocean and cause a drastic visual impact on Long Beach Island (LBI). Specifically, the Atlantic Shores Projects do not meet the visual and aesthetic goals of N.J.A.C. 7:7-1.1(c) or the scenic and visual preservation criteria of N.J.A.C. 7:7-15.4(b)5 and N.J.A.C. 7:7-16.10(c). Furthermore, the Atlantic Shores Projects should be moved farther away from the State's shoreline.

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 CZM Rules at N.J.A.C. 7:7-1.5 and discussed above, allows for uses that the NJDEP considers to be in the public interest provided mitigating or compensating measures can be taken so that there is a net gain in quality and quantity of the coastal resource of concern. The Energy Facility rule at N.J.A.C. 7:7-15.4(b)5 indicates that the scenic and visual qualities or coastal areas shall be maintained as important public resources in the siting of energy facilities. Consistency with the requirements of the Energy Facility rule at N.J.A.C. 7:7-15.4 and the Scenic Resources and Design rule at N.J.A.C. 7:7-16.10 are discussed in detail in the Environmental Analysis Report accompanying the Federal Consistency Certification, however, some information from the Environmental Analysis Report is provided below.

As discussed in detail in the Project Public Interest section of the Environmental Analysis Report accompanying the Federal Consistency Certification, the construction of the Projects within Federal waters is in the public interest as the Projects will contribute to the reduction of global, national, and regional greenhouse gas emissions. In addition, the Projects will aid in advancing renewable energy, improving resiliency for communities in New Jersey and the extended region, and improving energy efficiency throughout the region, as well as supporting national energy policies.

The Projects have been designed to minimize visual impacts to the maximum extent feasible within the limits of Atlantic Shores' acquired Lease Area, preventing further movement from the shoreline. BOEM's DEIS included a Visual Impact Assessment (VIA) which presents the seascape, landscapes, and visual impact assessment (SLVIA) methodology and key findings that BOEM used to identify the potential impacts of offshore wind structures (i.e. WTGs and OSSs) on scenic and visual resources within a specified geographic area. The conclusions of the VIA indicate that major and moderate visual impacts are anticipated as a result of the construction of the Projects. However, visibility of the Projects would vary daily depending on many factors, such as view angle, sun angle, atmospheric conditions, distance from the WTGs by the viewer, elevation of the view, and lighting of the WTGs. Therefore, per the DEIS, variations through the course of a day may result in periods of major visual effects, while at other times of the day would

have moderate, minor or negligible effects. Mitigation to minimize visual impacts of the Projects to the maximum extent practicable will occur as described below.

As discussed in the DEIS, Atlantic Shores is considering the use of a Federal Aviation Administration (FAA) approved Aircraft Detection Lighting System (ADLS), which is a lighting system that would only activate WTG and met tower lighting when aircraft enters a predefined airspace. For the Projects, based on historical air traffic data, obstruction light activation under ADLS was estimated to occur approximately 9 hours over the course of 1 year for flights passing through the Projects' light activation volume, which equals less than 1 percent of the time that full-time lighting systems would be active. The use of the ADLS is anticipated to result 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 the standard continuous, medium-intensity red strobe FAA warning system due to the duration of activation.

Additionally, the design of the WTGs, using white paints and slender builds, is proposed to minimize their visibility from the shoreline. This will eliminate the need for daytime warning lights or red paint markings on the blade tips making them less noticeable visually from the shoreline.

Furthermore, the DEIS considers alternatives to the Projects which would result in modifications to the WTG layout in order to further reduce visual impact. However, as noted in the DEIS, the effects of the modified WTG layouts on seascape character, open ocean character, landscape character, and viewer experience would be similar to the effects of the Projects as proposed.

The received comment also requested that the Projects be moved to a location farther from the State's shoreline. Through a competitive leasing process under 30 C.F.R. 585.211, BOEM awarded Atlantic Shores the Lease Area in which an offshore wind farm could be planned and sited. The Lease Area begins approximately 9 miles off New Jersey's coast and extends offshore to a distance of approximately 24 miles. The Projects are proposed under this Federal Consistency Certification request to be constructed within the limits of the awarded Lease Area. Atlantic Shores does not have access to other parts of the OCS outside of the Lease Area for potential offshore wind farm development. Therefore, there are no other options than siting of the Projects within this established BOEM Lease Area in order to minimize visual impacts.

It is also important to note that the DEIS suggests and Atlantic Shores has agreed to prepare and implement a scenic and visual resource monitoring plan that monitors and compares the visual effects of the Projects during construction, operation and maintenance phases (daytime and nighttime) to the finding in the Visual Impact Assessment (COP, Appendix II-M) and verifies the accuracy of the visual simulations. The plan will include documentation of meteorological influences on actual wind turbine visibility over a duration of time from selected key onshore observation points as determined by BOEM and Atlantic Shores. The plan will also include ADLS monitoring and documentation of effectiveness. These Atlantic Shores commitments will support the science relevant to simulating and evaluating potential scenic and visual effects associated with offshore wind development. Details for monitoring and reporting procedures would be included in the plan. The DEIS acknowledges that this mitigation measure would not reduce the visual

impact of the offshore wind farm. However, the implementation of this mitigation measure will advance the science of accurately simulating and evaluating visual impacts from offshore wind.

Employment

Comment

The Atlantic Shores Projects will cause both a net employment loss in the State for any single year and a loss of more than 200 person-years of employment in the State's coastal tourism industry in any single year and, therefore, should be prohibited.

Response

The Energy Facility rule at N.J.A.C. 7:7-15.4(c) indicates that coastal energy facilities construction and operation shall not directly or indirectly result in a net loss of employment in the State for any single year. The rule goes on to say that coastal energy facility construction and operation which result in loss of 200 or more person-years of employment in jobs in New Jersey directly or indirectly related to the State's coastal tourism industry in any single year is prohibited. Consistency with the requirements of the Energy Facility rule at N.J.A.C. 7:7-15.4 are discussed in detail in the Environmental Analysis Report accompanying the Federal Consistency Certification, however, some information from the Environmental Analysis Report is provided below.

Based upon information presented in the COP and DEIS, it is not anticipated that the Projects will result in a net loss of 200 jobs in NJ. The Projects do have the potential to impact jobs associated with commercial and recreational fishing and associated land-based support businesses. However, according to the COP submitted to BOEM, the Projects are expected to directly create more than 22,290 full time equivalent (FTE) jobs, indirectly create more than 11,810 FTE jobs, and induce over 14,820 FTE jobs throughout their lifecycles.

Impacts to Navigation

Comment

The Atlantic Shores Projects will create a navigation hazard in the through-ways between wind energy project areas. The WTGs need to be marked and lit for visibility.

Response

Navigation channels as defined per N.J.A.C. 7:7-9.7(a) are tidal water areas including the Atlantic Ocean, inlets, bays, rivers and tidal guts with sufficient depth to provide safe navigation. Navigation channels include all areas between the top of the channel slopes on either side. These navigation channels are often marked with buoys or stakes. Major navigation channels are shown on NOAA/National Ocean Service Charts. Consistency with the requirements of the Navigation Channels rule at N.J.A.C. 7:7-9.7 is discussed in detail in the Environmental Analysis Report accompanying the Federal Consistency Certification, however, some information from the Environmental Analysis Report is provided below.

Per the rule, development activities which would cause a loss of navigability or the placement of any structures within a navigation channel is prohibited. The rule goes on to say that the placement of structure within 50 feet of any authorized navigation channel is discouraged, unless it can be demonstrated that the proposed structure will not hinder navigation. There are no demarcated navigation channels within the Lease Area where the WTGs and OSSs will be located. Furthermore, the portions of the ECCs in Federal waters range in width from approximately 3,300 to 4,200 ft (1,000 to 1,280 m). Neither of these ECCs crosses established navigation channels. Therefore, no structures will be placed within a navigation channel or within 50 feet of a navigation channel.

In order to address concerns related to navigation hazards and as mentioned previously, a Navigation Safety Risk Assessment was prepared and is included in the COP, Appendix II-S. Key considerations evaluated in the Assessment include the safety of navigation, the effect on traditional uses of the waterway, and the impact on maritime search and rescue activities by the USCG and others. The result of the assessment indicates that the overall traffic density within the area proposed to be occupied by the WTGs and OSSs is relatively low, with two or more vessels present in the 102,055 acre area for only 15.6% of the time or 1,362 hours per year on average.

The COP indicates that during project construction, operation, maintenance, and decommissioning, the use of vessels and aircraft for these efforts will affect navigation in the Lease Area where the WTGs and OSSs will be located. However, mitigation measures are presented in the COP in order to negate impacts on navigation. Some of these proposed measures by Atlantic Shores include the use of a Marine Coordinator to manage vessel movements in the Lease Area, development of a construction communications plan, development of a Fisheries Communication Plan, implementation of non-regulatory safety buffers, and continued coordination with the USCG and NOAA on navigational chart updates. Additional mitigation measures suggested in the DEIS include development of a Cable Maintenance Plan, implementation of incident reporting, and expansion of the Atlantic Shores proposal for a Fisheries Communication Plan. These measures will aid in negating any impacts to navigation resulting from any increased vessel traffic during the construction, operation, maintenance and decommissioning of the Projects.

The DEIS also indicates that the WTGs and OSSs will be marked and lit in accordance with the minimum FAA, BOEM, and USCG requirements necessary to maintain navigation and aviation safety.

Impacts to Whales

Comment

The Atlantic Shores Projects will result in adverse impacts to whales, specifically North Atlantic Right Whales (NARW), Fin Whales, and Humpback Whales. Impacts to these species would result from noise and increases in vessel traffic generated by the construction, operation, and decommissioning of the turbines.

Response

Marine mammals, such as whales, are important to the marine ecosystem, serving many ecological roles in the world's oceans. Whales specifically have been identified as important for both the storage and transfer of carbon. All marine mammals, which include whales, are protected

under the Marine Mammal Protection Act (MMPA). Some species, such as the Fin Whale and NARW, are protected under the Endangered Species Act (ESA). It should be noted that pursuant to Section 109 of the MMPA, 16 U.S.C. 1379, states are not permitted to enforce any state laws or regulations relating to the taking of any species of marine mammal unless the Federal government has transferred authority to the state for the conservation and management of a particular species. In other words, the MMPA preempts state laws related to marine mammals. Thus, the Endangered or Threatened Wildlife or Plant Species Habitats Rule as it relates to marine mammals is non-enforceable by the State of New Jersey.

The COP indicates that 37 marine mammal species are present in the OCS. Within the Projects' area, whale species such as Fin Whales, Humpback Whales, and NARW are regular or common occurrences. It is indicated in the COP that vessel movements, noise, light, electromagnetic fields, installation of new structures and cables, and the presence of structures or cables may potentially affect marine mammals, such as the whale species referenced above.

Atlantic Shores has acknowledged in its COP that the risk of impacts to marine mammals from activities associated with the Projects can be significantly reduced, if not avoided, through the implementation of monitoring measures designed to detect marine mammals before they are impacted, as well as the implementation of mitigation techniques to reduce the potential for effects. Atlantic Shores intends to implement a comprehensive mitigation program to avoid and minimize impacts to marine mammals. The measures Atlantic Shores intends to implement in order to avoid adverse effects to marine mammals, including NARWs, Fin Whales, and Humpback Whales, are described below. These measures include, but are not limited to, adherence to marine wildlife viewing and safe boating guidelines, establishment of marine mammal protection zones, implementation of measures to reduce noise productions, and to potentially utilize innovative technologies and methods to improve the monitoring of marine mammals.

The DEIS indicates that whales are more susceptible to vessel strikes than other marine mammals due to their large size, slower travel and maneuvering speeds, lower avoidance capability, and increased proportion of time they spend near the surface. In order to minimize the potential for vessel collisions with marine mammals, including whales, during construction, operation, maintenance, and decommissioning of the Projects, Atlantic Shores intends to follow federal guidelines to avoid vessel interactions with whales and adhere to all NOAA-mandated Seasonal Management Areas (SMA) or Dynamic Management Areas (DMA), which includes reduced vessel speeds during certain times of the year. Atlantic Shores will also monitor marine mammal activity during all phases of the Projects to ensure that the chances for possible collisions are minimized. Training will be provided to all vessel personnel responsible for operation, navigation, or lookout on marine mammal siting, avoidance, and reporting measures. Furthermore, Atlantic Shores is exploring the potential to utilize real-time monitoring, autonomous underwater vehicles, and unmanned aerial systems to support the detection of marine mammals within the Projects' area.

Additionally, the NJDEP and NJBPU recently awarded $47,383 to NOAA Fisheries to extend seasonal aerial whale surveys by the Northeast Fisheries Science Center (NFSC) into the coastal region off northern New Jersey and awarded $929,593 to Rutgers University to evaluate the movements and habitat use of Humpback Whales and Fin Whales in and around the New Jersey offshore wind lease areas. In the latter study, whales will be affixed with satellite transmitters that will allow researchers to better understand their ecology and behavior, such as feeding patterns and movements. Researchers will also assess where there are potential risks associated with time

spent by whales in wind lease areas or major shipping lanes to inform any potential mitigation efforts if necessary.

With respect to potential noise effects, during all phases of the Projects, Atlantic Shores will implement a suite of marine mammal monitoring and mitigation measures to decrease the risk of exposures to marine mammals occurring in proximity to noise-inducing activities during construction. These include monitoring throughout construction activity to detect marine mammals before being exposed to potentially injurious or disruptive sounds, deployment of passive acoustic monitors, maintenance of marine mammal protection zones to halt harmful activities when marine mammals are detected, implementation of equipment operating procedures to control noise, prohibition of significant noise generating activities during low visibility conditions when marine mammals cannot be detected, and use of night vision devices during period of inclement weather and/or nighttime activities.

With respect to seafloor disturbance, the installation and maintenance of new foundation structures and offshore cables include installation of associated scour and cable protection. It is anticipated that these activities would only have a limited effect on marine mammals through direct seafloor disturbance and temporary increases in suspended sediment and deposition because the disturbance area would be relatively small in relation to the total area of surrounding habitat. The presence of structures and cables would create areas of hard-substrate habitat in currently sandy habitat. These changes may lead to temporary and localized shifts in limited areas of marine mammal habitat and changes to prey abundance, hydrodynamics, suspended sediment and deposition rates, and both invasive and non-invasive species attraction. Additionally, the presence of structures is not expected to adversely impede marine mammal movements.

With respect to electromagnetic fields (EMF), Atlantic Shores conducted an EMF study to predict EMF levels from the Projects' submarine electrical system operation, which includes a combination of HVDC and HVAC cables and OSSs. The study results presented by Atlantic Shores indicate that the EMF levels are anticipated to decrease exponentially with increasing distance from the cables such that EMF does not pose a risk to marine mammals. Similarly, due to the fact that the effects of EMF levels are generally limited to within 3 feet of the cable, BOEM anticipates that any impact upon marine mammals would likely be insignificant and limited to only minor and short-term deviations from normal activity. The NJDEP concurs with this assessment.

As part of NJDEP's continuing commitment to supporting rigorous scientific research on potential impacts of the development, operation, and eventual decommissioning of offshore wind facilities, in March of 2021, the NJDEP's Division of Science and Research published a white paper entitled "Review of the Impacts to Marine Fauna from Electromagnetic Frequencies (EMF) Generated by Energy Transmitted through Undersea Electric Transmission Cables", authored by Joseph Bilinski. This publication reviewed the current scientific literature summarizing the observed, *in situ* effects of EMF on marine fauna from interactions with and proximity to undersea transmission cables, and, as described below, further supports the NJDEP's conclusion that the effects of EMP do not pose a risk to marine mammals.

The installation and operation of submarine transmission cables can affect marine benthic organisms and habitats in a variety of ways, some of which can include sediment disturbance, reef effects, thermal emission, and notably the distortion of the natural geomagnetic field via emission of electromagnetic frequencies. Electromagnetic Frequencies, or EMFs are generated by electric current flowing through undersea transmission cables that can be associated with onshore or offshore renewable energy projects (wind or hydrokinetic resources) or other power-generating

sources (traditional power plants). Based on empirical evidence and laboratory investigations, the observed impacts to marine biota and ecosystems are considered to be minor or short-term. Electrosensitive species such as elasmobranchs and benthic species have been shown to sense EMFs more acutely than marine mammals and pelagic fishes, although only minor responses such as lingering near or attraction to cabled areas have been noted. However, uncertainties do remain as to whether physiological impacts occur and what life stage is most affected, and or if any long-term impacts will develop (Bilinski, NJDEP 2021).

Additionally, in its December 2023 publication entitled "ENVIRONMENTAL STUDIES Electromagnetic Fields (EMF) from Offshore Wind Facilities," BOEM notes that naturally occurring EMF are present everywhere in the oceans. For offshore wind energy projects, the primary sources of EMF are inter-array cables that carry electricity from each wind turbine to the export cables, which carry that electricity to shore. The power cables do not produce an electric field on the seafloor or within the ocean because the voltage on the copper conductors within the cable is blocked by a grounded metallic covering on the cable. However, the magnetic field from the undersea power cable is shielded far less by this metallic covering; therefore, a 60-Hz AC magnetic field would surround each cable. The 60-Hz AC magnetic field induces a weak electric field in the surrounding ocean that is unrelated to the voltage of the cable but instead is related to the amount of current flow through the cable. This means that when the current flow on the undersea power cable increases or decreases, both the magnetic and the induced electric fields increase or decrease (BOEM 2023).

In addition to the metallic covering around the cable, undersea power cables are typically buried under the seafloor for their protection. As EMF from undersea power cables decrease rapidly with distance from the cable, burying the cables substantially reduces the levels of magnetic and induced electric fields in seawater. Increasing the burial depth from 3 feet to 6 feet reduces the magnetic field at the seafloor approximately four-fold. Where hardbottom seafloor conditions or existing infrastructure is encountered, the power cables are often covered with 6- to 12-inch thick concrete mattresses, rock berms, or other measures to protect the cable. While this covering does not achieve the same level of EMF reduction as burial and distance, beyond about 10 feet from the cable, the field levels for buried and mattress-covered cables are quite similar (BOEM 2023).

With respect to artificial lighting, such lighting will be utilized during activities associated with the construction, operation, maintenance, and decommissioning of the Projects. Atlantic Shores has stated in its COP that the amount of artificial lighting from vessels and structures associated with the Projects that would penetrate the sea surface is expected to be localized and minimal and unlikely to cause adverse effects to marine mammals or their prey species.

Furthermore, Atlantic Shores is conducting an assessment that considers how activities associated with the Projects may affect marine mammals in the Projects' area based on marine mammal distributions in the larger context of the Mid-Atlantic Bight. This assessment is intended to build upon and fill data gaps from previously completed Federally and State funded research efforts. Relevant studies, both completed and ongoing, such as underwater acoustic modeling, animal movement and exposure modeling, and aerial digital surveys have documented wildlife usage of the Projects' area.

Atlantic Shores is also developing a Marine Mammal Monitoring Plan in conjunction with key Federal, State and eNGO stakeholders that will inform the Projects' activities and decision-

making. In addition, Atlantic Shores will also be implementing a comprehensive program of best management practices (BMPs) to minimize and avoid the Projects' impacts, while exploring new, innovative minimization/avoidance approaches. After mitigation measures are implemented, the residual risk of impacts to marine mammals is expected to be significantly reduced.

The DEIS concludes that the construction, operation, maintenance and decommissioning of the Projects would result in negligible to moderate adverse impacts on most marine mammal species. Adverse impacts would result mainly from pile-driving noise, vessel noise, and presence of structures. Beneficial impacts could also result from the presence of structures. However, impacts to NARW would be moderate to major. BOEM notes that most marine mammals are expected to recover completely when impact-producing factor stressors are removed and remedial or mitigating actions are taken. Although, impacts on individual NARWs could have severe population-level effects (for example, if vessel strikes were to occur). In order to mitigate these effects to marine mammals and whales, BOEM intends to require implantation of the following measures: marine debris awareness training for appropriate personnel to minimize the risk of marine mammal ingestion of or entanglement in marine debris, development and implementation of a Passive Acoustic Monitoring Plan to minimize exposures during pile driving, development and implementation of a Pile Driving Monitoring Plan to increase accountability of underwater noise mitigation during pile driving, Protected Special Observer (PSO) coverage to detect ESA-listed whales, implementation of sound field verification, implementation of shut down zones, development and implementation of an Alternative Monitoring Plan, regular hauling of sampling gear, gear identification to improve accountability in the case of gear loss, survey training, implementation of monthly and annual reporting requirements for documenting marine mammal take, use of passive acoustic monitoring to document the presence of marine mammals to improve accountability of impact evaluations, periodic underwater surveying, implementation of criteria to minimize vessel interactions, development of an Operational Sound Field Verification Plan to confirm impacts of noise, and compliance with Letter of Authorization (LOA) requirements.

Impacts to Birds, Specifically Piping Plover

Comment

The Atlantic Shores Projects will result in adverse impacts to piping plover through crossing of the WTA to reach its nesting grounds.

Response

The Atlantic Coast population of piping plover breeds on beaches from Atlantic Canada to North Carolina, and winters in coastal areas of eastern Mexico and the Caribbean. As acknowledged in the COP, the Federally protected piping plover, roseate tern, and red knot may pass through the portions of the Projects located in Federal waters. The DEIS confirms that the three above-referenced ESA species have the potential to pass through the area of the Projects, but only during the spring and fall migration.

As stated in the COP, current tracking data indicates minimal use of the WTA by piping plovers. In a tracking study involving 102 piping plovers, two individual tracks were calculated to overlap the northern portion of the New Jersey Wind Energy Area (NJWEA). It is important to note that the terrestrial receiver stations did not fully cover the offshore environment and no piping plovers were tagged south of Rhode Island, so flight paths are interpolated from point data. Peak

piping plover detections occurred on evenings in early August during southwest winds. The experimental placement of a Motus antenna on one or multiple Atlantic Shores buoys in 2021, are meant to provide future information on piping plover movements within the WTA.

The DEIS indicates that the New Jersey Baseline Studies, discussed in more detail later on in this document, rarely observed these species near the WTA, as they mainly occur in the coastal portions of New Jersey during spring and summer. In addition, they were not detected during the Atlantic Shores digital aerial surveys. Automated radiotelemetry tracking studies of these species have also found extremely minimal, infrequent passage through the lease area, including the NJWEA. BOEM has concluded that due to the anticipated use of flashing red tower lights instead of constant white light to reduce further bird attraction, consideration of the use of ADLS to significantly reduce the number of hours FAA lighting will be illuminated, restricted seasons of exposure, and small number of individuals that could cross the Projects' area, the Projects would not likely adversely affect ESA-listed roseate terns, piping plovers, eastern black rails, or saltmarsh sparrows.

BOEM is preparing a Biological Assessment (BA) for the potential effects on ESA-listed species, which includes piping plover. A preliminary draft found that the Projects or Proposed Action may affect but is not likely to adversely affect the roseate tern, piping plover, eastern black rail, or saltmarsh sparrow, or their critical habitat. BOEM will request concurrence from the United States Fish & Wildlife Service (USFWS) on its conclusion that the impacts of the proposed activities are expected to be discountable and insignificant, and thus may affect but are not likely to adversely affect the piping plover, roseate tern, eastern black rail, or saltmarsh sparrow. Consultation with USFWS pursuant to Section 7 of the ESA is ongoing, and results of the consultation will be presented in BOEM's FEIS.

Impacts to Marine Life, Endangered Species, and Migratory Birds

Comment

The Atlantic Shores Projects' Lease Area is too close to the shoreline and will be harmful to marine/aquatic life, endangered species, and critical wildlife habitat for migrating birds.

Response

As discussed in further detail below, Atlantic Shores is limited to construction of its proposed offshore wind farm to its acquired Lease Area. Therefore, the WTA and associated components of the Projects cannot be located farther offshore.

Marine/Aquatic Life

As discussed throughout this document and the Environmental Analysis Report accompanying the Federal Consistency Certification, it is anticipated that the construction and operation of the Projects will pose impacts to marine and aquatic life. However, as presented in the COP, discussed in the DEIS, and discussed in further detail in other sections of this document and the prepared Environmental Analysis Report, measures will be undertaken to avoid, minimize, and mitigate any impacts to marine and aquatic life resulting from the Projects. Additionally, the

Projects are consistent with the state's coastal enforceable policies pertaining to the protection and minimization of impacts to aquatic resources.

Endangered Species

Consistency with the requirements of the Endangered or Threatened Wildlife or Plant Species Habitats rule at N.J.A.C. 7:7-9.36 are discussed in detail in the Environmental Analysis Report accompanying the Federal Consistency Certification. However, to summarize the information contained in the Environmental Analysis Report, Atlantic Shores is committed to implementing the appropriate measures and utilizing BMPs in order to minimize and/or mitigate impacts to endangered or threatened species. Please refer to the Environmental Analysis Report as well as other sections of the document for further details specific to protected species.

Critical Wildlife Habitat for Migratory Birds

Critical wildlife habitats are defined at N.J.A.C. 7:7-9.37(a) as specific areas known to serve an essential role in maintaining wildlife, particularly wintering, breeding, and migrating. Critical wildlife habitats within the coastal zone consists of patches of woody vegetation which serve a critical role in providing resting and foraging habitat for migratory birds. Within the coastal zone mainland, patches of woody vegetation (i.e., trees, scrub-shrub, etc.) equivalent to 20 acres in size and greater, are valued as stopover habitat for migratory birds because they offer critical cover and food resources for migratory bird species. As the area of the Projects on the OCS does not contain the habitat described above, consistency with the requirements of the Critical Wildlife Habitats rule at N.J.A.C. 7:7-9.37 is not required.

However, the DEIS notes that birds may pass through the area of the Projects on the OCS. These include land birds (i.e. songbirds and raptors), coastal waterbirds (i.e. shorebirds, long-legged waders), and marine birds (i.e. loons and sea ducks). The DEIS notes that locations of the 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.

Additionally, NJDEP and NJBPU recently awarded $1.3 million to a collaboration of research entities led by the American Bird Conservancy to expand an existing regional network that tracks the movements of radio-tagged birds and bats. This funding will result in the deployment and maintenance of 10 new land based Motus receiver stations and 10 ocean buoy stations as part of the Motus Wildlife Tracking System in strategic locations throughout New Jersey and offshore. The expansion will improve regional network coverage and provide baseline data to aid researchers in assessing species migration routes to and through New Jersey airspace and offshore wind lease areas.

Shellfish Habitat & New Dredging
Comment

As per N.J.A.C. 7:7-9.2 Shellfish habitat, this habitat is designated as a special area. New dredging within shellfish habitat is prohibited. Furthermore, Atlantic Shores has not satisfied its burden of positively demonstrating that the Projects' construction and operation activities will avoid or minimize impacts to shellfish habitat to the greatest extent possible.

Response

The Shellfish habitat rule at N.J.A.C. 7:7-9.2(a) defines shellfish habitat as an estuarine bay or river bottom which currently supports or has a history of production for hard clams (Mercenaria mercenaria), soft clams (Mya arenaria), eastern oysters (Crassostrea virginica), bay scallops (Argopecten irradians), or blue mussels (Mytilus edulis), or otherwise listed below. A shellfish habitat area is defined as an area which meets one or more of the following criteria:

1. The area has a current shellfish density equal to or greater than 0.20 shellfish per square foot;

2. The area has a history of natural shellfish production according to data available to the New Jersey Bureau of Shellfisheries, or is depicted as having high or moderate commercial value in the Distribution of Shellfish Resources in Relation to the New Jersey Intracoastal Waterway (U.S. Department of the Interior, 1963) and/or "Inventory of New Jersey's Estuarine Shellfish Resources" (Division of Fish, Game and Wildlife, Bureau of Shellfisheries, 1983-present);

3. The area is designated by the State of New Jersey as a shellfish culture area as authorized by N.J.S.A. 50:1 et seq. Shellfish culture areas include estuarine areas presently leased by the State for shellfish aquaculture activities or hard clam relay, transplant and transfer as well as those areas suitable for future shellfish aquaculture development; or

4. The area is designated as productive at N.J.A.C. 7:25-24, Leasing of Atlantic and Delaware Bay Bottom for Aquaculture.

The work subject of the Federal Consistency Certification request is limited to the work in Federal waters or beyond (east) of the State's 3 nautical mile (nm) jurisdictional limit, which includes the construction of the WTGs, OSSs, inter-array and/or inter-link cables, met tower, metocean buoys, and a portion of the Projects' export cables. This work proposed in Federal waters is not proposed within shellfish habitat as defined above. Therefore, the construction of the Projects will not result in any adverse impacts to shellfish habitat as defined in the CZM Rules. It should be noted that any impacts to shellfish habitat within State waters will be discussed as part of the decision documents on the pending State permit applications.

Impacts to Surf Clam Areas
Comment

Atlantic Shores concedes that the proposed offshore wind activities will result in the "destruction, condemnation, or contamination of surf clam areas", but cannot demonstrate that the activities will actually minimize impacts to surf clam areas. Furthermore, it has not been adequately explained why the Projects are in the national interest.

Response

Surf clam areas are defined at N.J.A.C. 7:7-9.3(a) as coastal waters which can be demonstrated to support significant commercially harvestable quantities of surf clams (Spisula solidissima), or areas important for recruitment of surf clam stocks. This rule prohibits destruction, condemnation or contamination of surf clam areas with the exception of development that is in the national interest where there are no prudent or feasible alternative sites and the impacts to surf clam areas are minimized or for sand and gravel mining to obtain material for beach nourishment. Consistency with the requirements of the Surf Clam Areas rule at N.J.A.C. 7:7-9.3 are discussed in detail in the Environmental Analysis Report accompanying the Federal Consistency Certification decision, however, some information from the Environmental Analysis Report is provided below.

According to the DEIS, benthic resources within the Projects' area include Atlantic surf clam (Spisula solidissima). This is also confirmed by the comments on the Federal Consistency Certification application received from the NJDEP's Marine Resources Administration (MRA) which indicated that the Projects' area within federal waters is collocated with productive Atlantic surf clam areas, which support significant commercially harvestable quantities of Atlantic surf clams and are important for the recruitment of Atlantic surf clam stocks. Furthermore, the MRA notes that the sand bottom habitat that supports this population will be altered permanently by offshore wind turbine foundations and scour protections and temporarily by cable installation. In addition, the construction of the export transmission cables is likely to cause a temporary, one-time mortality event to Atlantic surf clams in the cable corridors. The construction and operation of the Projects will also preclude vessels and gear currently used by the Atlantic surf clam fishery to fish in the WTA and over portions of the cable corridors that require cable protection measures. First, a detailed discussion of how the Projects are in the public interest, which includes the interest of the State of New Jersey as well as in the regional and national public interest, is presented in the Project Public Interest section of the Environmental Analysis Report accompanying the Federal Consistency Certification decision. Additionally, there is no other prudent or feasible alternative for the location of the WTA. The Projects' components within the WTA must be confined to Atlantic Shores' Renewable Energy Lease Area OCS-A 0499 designated by BOEM and acquired by Atlantic Shores through a

competitive leasing process for offshore wind development. Atlantic Shores does not have the ability to construct the components of the WTA outside of the limits of the Lease Area. Additionally, offshore wind projects, such as the Project proposed under this Federal Consistency Certification request, are water-dependent uses. Offshore wind projects benefit from the reliability of ocean winds with higher wind speeds over the ocean versus over land, and the lack of physical interferences within the ocean that can be encountered on land. Moreover, the Projects' components within the Lease Area require expansive areas that cannot be accommodated on land in the State of New Jersey.

In order to minimize impacts to surf clam areas, numerous mitigation measures will be implemented. Note, however, that those mitigation measures intended to provide compensatory mitigation or other mitigation measures to commercial fisheries or in-hire fishermen associated with impacts to the surf clam fishing industry will be discussed in the Commercial Fishing section of this document.

As indicated in the consistency statement submitted with the Federal Consistency Certification request, Atlantic Shores is taking steps to minimize and then mitigate impacts to surf clams and their habitats. The proposed electric transmission export cables will be installed using low impact installation techniques that limit substrate disturbance and sediment suspension.

Additionally, as outlined in the COP, Atlantic Shores is working closely with the surf clam industry to better understand how the effects of climate change are influencing the distribution and abundance of surf clams within Atlantic Shores lease area and the greater Mid-Atlantic Bight. As stated in the DEIS, Atlantic Shores has also committed to comprehensive monitoring of fisheries and benthic habitat conditions throughout the phases of the Project's life cycle. These monitoring activities will document baseline environmental conditions relevant to fisheries and benthic resources in the WTA, and monitoring of those conditions will continue throughout construction and installation, O&M, and decommissioning of the Projects. These surveys will allow Atlantic Shores to measure Project related disturbances and monitor the recovery of habitats and biological communities. Atlantic Shores' Fisheries Monitoring Plan will utilize survey gear including clam dredges, demersal fish trawls, and fish traps/pots. Benthic monitoring surveys will utilize gear types including benthic grab samplers, multibeam echosounders, and underwater video cameras. These measures are considered part of the Projects.

According to comments provided to the Division by MRA, research monitoring is an important component of mitigation, and Atlantic Shores has commissioned informative and rigorous scientific studies to better characterize the resources and the potential impacts of offshore wind activities. One area of focus has included studying the potential socioeconomic impacts of offshore wind development on the Atlantic surf clam fishery, which reflects an understanding of the value of the fishery to New Jersey and the vulnerability of this fishery to offshore wind facility construction, operation, and maintenance. The NJDEP welcomes such novel research to model and quantify potential impacts upon the commercial fishing industry, especially since existing research and guidance materials have been primarily focused on ecological concerns. The scientists engaged in this work, led by Daphne Munroe at Rutgers University Haskins Shellfish Laboratory, are the academic experts on this species and fishery in New Jersey and have developed a cooperative relationship with the industry, the Science Center for Marine Fisheries, and the Virginia Institute of Marine Science.

Specific to surf clams, to ensure baseline data concerning potential effects upon and recovery of benthic resources is well-established, Atlantic Shores has committed to implementing a Hydraulic Clam Dredge Survey as outlined in the December 15, 2021 Fisheries Monitoring Plan (COP, Appendix II-K) for the purpose of identifying significant changes to the presence and size of ocean quahogs and Atlantic surf clams within the wind turbine area. This survey includes analysis of potential effects associated with the WTG, inter-array cable, and export cable installation. Atlantic Shores has committed to implementing an extensive benthic habitat monitoring program along the ECC as described in the Benthic Monitoring Plan (COP, Appendix II-H), for the purpose of identifying potential changes in benthic macroinvertebrate communities and benthic habitat before and after construction.

Furthermore, as mentioned previously, Atlantic Shores has committed to entering into a MOU with the NJDEP through the execution of a Letter of Intent, signed on April 1, 2024, to provide environmental mitigation measures, including assessing potential environmental impacts and avoiding, minimizing, and mitigating likely adverse effects upon natural resources, such as surf clams and their respective habitats, pertaining to the construction, operation, and decommissioning of the proposed Project.

To summarize, the Project subject of this Federal Consistency Certification application within federal waters, which is in the public interest as described in detail above, has no other

prudent or feasible alternative location. Additionally, minimization of impact to surf clams will occur through the measures described above. The acceptable criteria for sand and gravel mining are not applicable to this Offshore Project. Therefore, consistency with the Surf Clam Areas rule has been demonstrated for the Projects.

Impacts to Prime Fishing Areas

Comment

The Atlantic Shores Projects are prohibited uses in prime fishing areas.

Response

Prime fishing areas, per N.J.A.C. 7:7-9.4(a), include tidal water areas and water's edge areas with a demonstrable history of supporting a significant local intensity of recreational or commercial fishing activity. These include all coastal jetties, groins, public fishing piers or docks, and artificial reefs. Prime fishing areas also include features such as rock outcroppings, sand ridges or lumps, rough bottoms, aggregates such as cobblestones, coral, shell and tubeworms, slough areas and offshore canyons. Permissible uses of these areas include activities such as recreational and commercial finfishing and shellfishing, scuba diving, and other water related recreational activities. Prohibited uses of prime fishing areas include sand and gravel submarine mining which would alter existing bathymetry to a significant degree so as to reduce the high fishery productivity of these areas. Consistency with the requirements of the Surf Clam Areas rule at N.J.A.C. 7:7-9.3 are discussed in detail in the Environmental Analysis Report accompanying the Federal Consistency Certification, however, some information from the Environmental Analysis Report is provided below.

There are several areas classified as prime fishing areas by the NJDEP that are located within the proposed footprint of the Projects in Federal waters. While the Projects do not involve sand and gravel mining activities, the construction of the Projects in Federal waters is an

activity that may result in alterations of existing bathymetry. The consistency statement submitted by Atlantic Shores indicates that the installation of the offshore facilities will utilize low impact techniques which will limit substrate disturbance and sediment suspension in order to minimize impacts to prime fishing areas.

According to the DEIS and as discussed in the Environmental Analysis Report accompanying the Federal Consistency Certification, the Projects would require the removal of some sand bedforms via "pre-sweeping" in 20 percent of ECCs and 10 percent of inter-array cable corridors. These activities would create narrow troughs or flats in fields of sand waves, altering the seabed profile and potentially causing localized, short-term impacts on finfish, invertebrates, and essential fish habitat (EFH). Sand ripples provide vertically structured habitat for finfish and invertebrates in an otherwise flat seascape. BOEM anticipates the redeposition of sand ripples impacted by the pre-sweeping activities into areas of similar sediment composition. BOEM further anticipates tidal and wind-forced bottom currents to reform most ripple areas within days to weeks following disturbance. While some sand ripples may not recover to the pre-disturbance height and width, BOEM expects the habitat function to nonetheless fully recover post-disturbance. Therefore, BOEM expects that the impacts of seabed profile alterations on finfish, invertebrates, and EFH would be localized and short term, dissipating over time as mobile sand waves fill in the altered seabed profile.

Additionally, impacts from cable emplacement would be localized to the cable corridors. Impacts from habitat alteration would be long term only in areas where cables are armored. According to the DEIS, Atlantic Shores has sited offshore export cable routes to where they would minimize overlap with sensitive benthic habitats, and cables would be further micro-sited along those routes to avoid boulders and other hard-bottom habitat to the extent feasible. According to the DEIS, cable emplacement impacts would be further minimized to the extent feasible, by seasonal work window restrictions that avoid construction during periods when sensitive species and life stages would be present in the area of the Projects and by using cable installation tools that minimize the area and duration of sediment suspension. With these avoidance and conservation measures, BOEM anticipates that the probability of adverse impacts from cables on sensitive finfish, invertebrate, and EFH resources to be low.

The activity associated with the Projects, while impacting commercial and recreational fishing activity on a short-term, localized, and temporary basis, will not result in modifications of the area to a significant degree which would reduce the high fishery productivity of any prime fishing areas.

Impacts to Finfish Migratory Pathways

Comment

The Atlantic Shores Projects will obstruct pathways for highly migratory fish species, such as tunas, sharks, and swordfish.

Response

As per N.J.A.C. 7:7-9.5(a), finfish migratory pathways are waterways, including rivers, streams, creeks, bays and inlets, which can be determined to serve as passageways for diadromous fish to or from seasonal spawning areas, including juvenile anadromous fish which migrate in autumn and those listed by H.E. Zich (1977) "New Jersey Anadromous Fish

Inventory" NJDEP Miscellaneous Report No. 41 and including those portions of the Hudson and Delaware Rivers within the coastal boundary. Activities which create physical barriers to the movement of fish along finfish migratory pathways or which lower water quality to such an extent as to interfere with the movement of fish along finfish migratory pathways are prohibited.

The work proposed in Federal waters, which is the subject of this Federal Consistency Certification, will occur in the Atlantic Ocean, which is not a waterway described in the Finfish Migratory Pathways rule. Therefore, the portions of the Projects in Federal waters are not subject to consistency with this enforceable policy. However, it is important to note that the DEIS does not indicate that the portions of the Projects in Federal waters are anticipated to create physical barriers to the movement of fish or lower water quality to an extent that it would interfere with the movement of fish along finfish migratory pathways.

Per the DEIS, offshore wind structures would be constructed along migratory fish pathways for striped bass and Atlantic sturgeon. It is too early to evaluate the effect of offshore wind structures on fish and invertebrate movements and migrations; however, there is some evidence that offshore wind structures may create stopover locations for migratory fishes as indicated in research prepared by Rothermel et al. entitled "Comparative Migration Ecology of Striped Bass and Atlantic Sturgeon in the US Southern Mid-Atlantic Bight Flyway" and cited in the DEIS. Stopover locations may benefit migrating fish by providing feeding opportunities but may also

disrupt or slow migrations. These behavioral effects may affect the migrations of individual fish, but they are not expected to have broad impacts on migration. Other oceanographic conditions such as temperature and salinity are expected to remain the primary determinants of seasonal migrations.

Impacts to Submerged Vegetation Habitat

Comment

The Atlantic Shores Projects will impact submerged vegetation habitat in Barnegat Bay.

Response

The CZM rules at N.J.A.C. 7:7-9.6(a) defined submerged vegetation habitat as a special area consisting of water areas supporting or documented as previously supporting rooted, submerged vascular plants such as widgeon grass (Ruppia maritima), sago pondweed (Potamogeton pectinatus), horned pondweed (Zannichellia palustris), and eelgrass (Zostera marina). In New Jersey, submerged vegetation is most prevalent in the shallow portions of the Navesink, Shrewsbury, Manasquan, and Metedeconk Rivers, and in Barnegat, Manahawkin, and Little Egg Harbor Bays. Other submerged vegetation species in lesser quantities include, but are not limited to, the following: water weed (Elodea nuttalli), Eriocaulon parkeri, Liaeopsis chinesis, Naja flexilis, Nuphar variegatum, Potamogeton crispus, Potamogeton epihydrus, Potamogeton perfoliatus, Potamogeton pusillus, Scirpus subterminalis, and Vallisneria americana. Detailed maps of the distribution of the above species for New Jersey, and a method for delineation, are available from the Department in the New Jersey Submerged Aquatic Vegetation Distribution Atlas (Final Report), February, 1980, conducted by Earth Satellite Corporation and also on "Eelgrass Inventory" maps prepared by the Division of Fish and Wildlife, Bureau of Shellfisheries, 1983.

The work subject of the Federal Consistency Certification is limited to the work in Federal waters or beyond (east) of the State's 3 nautical mile (nm) jurisdictional limit, which includes the construction of the WTGs, OSSs, inter-array and/or inter-link cables, met tower, metocean buoys, and a portion of the Projects' export cables. This work proposed in Federal waters is not proposed within submerged vegetation habitat as defined above. Therefore, the construction of the Projects will not result in any adverse impacts to submerged vegetation habitat as defined in the CZM Rules.

It should be noted that any impacts to submerged vegetation habitat within New Jersey State waters will be discussed as part of the documents accompanying decisions on the pending State permit applications.

Impacts to Marine Fish and Fisheries

Comment

The Atlantic Shores Projects will result in adverse impacts to marine fish and fisheries. Furthermore, Atlantic Shores has not accurately acknowledged the full scope of its Projects' impacts to marine fish and fisheries.

Response

The Marine Fish and Fisheries rule at N.J.A.C. 7:7-16.2(b) discourages any activity that would adversely impact the natural functioning of marine fish or any New Jersey based marine fisheries or access thereto. "Discouraged", as defined in the CZM Rules at N.J.A.C. 7:7-1.5, indicates that the NJDEP may permit a use that is in the public interest provided that mitigating or compensating measures can be taken so that there is a net gain in quality and quantity of the coastal resource of concern. As discussed in detail within the Project Public Interest section of the Environmental Analysis Report accompanying the Federal Consistency Certification, the Projects are in the national, regional, and State of New Jersey's public interest.

As part of its COP, Atlantic Shores prepared an assessment of finfish, invertebrates, and essential fish habitat. The assessment included potential effects to finfish and invertebrates from electromagnetic fields, noise, suspended sediment, and possible changes in prey abundance. The results of this study as stated in the COP indicate that most effects of the Projects on fin fish, invertebrates, and essential fish habitat will be localized, short-term, and unlikely to cause population level effects. A detailed description of the potential impacts to marine fish is included in the Environmental Analysis Report accompanying the Federal Consistency Certification. Impacts related to impacts to the commercial and recreational fishing industry is also detailed in the Environmental Analysis Report and discussed previously within this document.

The Environmental Analysis Report accompanying the Federal Consistency Certification discusses measures Atlantic Shores intends to implement to minimize and mitigate potential effects to marine fish. First, regarding cable installations, Atlantic Shores indicates in its COP that the siting of offshore export cable routes was designed to minimize overlap with sensitive benthic habitats. Additionally, the cables are further micro-sited to avoid boulders and other hard-bottom habitat to the maximum extent possible. Seasonal work window restrictions would prevent construction during periods when sensitive species and life stages would be present in the Projects' area. Cable installation tools would be utilized which minimize the area of disturbance and duration of sediment suspension.

Regarding minimization of noise impacts due to pile-driving during construction activities, Atlantic Shores will utilize soft-start procedures and noise abatement systems, implement time-of-day restrictions unless effective reduced-visibility monitoring equipment is available, and implement seasonal work windows as described above.

Similarly, as outlined in Appendix G of the DEIS, BOEM intends to recommend/require robust monitoring, minimizing, and mitigating measures to avoid, minimize, and mitigate any adverse impacts to marine fish as a result of the construction, operation, maintenance, and decommissioning of the Projects.

Impacts to Historic Properties

Comment

The Projects will negative impact a number of significant historic properties along the New Jersey coast.

Response

The Historic and Archaeological Resources rule at N.J.A.C. 7:7-9.34 aims to discourage coastal development from detracting, encroaching upon, damaging, or destroying the value of historic and archaeological resources.

As indicated in the Environmental Analysis Report accompanying the Federal Consistency Certification, the State's Historic Preservation Office (HPO) is currently engaged with ongoing consultation with BOEM pursuant to their obligations under Section 106 of the National Historic Preservation Act (NHPA), as amended, for the identification, evaluation and treatment of historic properties within the Projects' area of potential effects. Section 106 requires Federal agencies to consider the effects of historic properties of projects they carry out, assist, fund, permit, license, or approve.

Further, the HPO has been reviewing the Projects and has provided the Division with comments concerning the Projects' impact to historical and archaeological resources. HPO has informed the Division that it is currently engaged in ongoing consultation with BOEM pursuant to its obligations under Section 106 of the NHPA, as amended, for the identification, evaluation and treatment of historic properties within the Projects' area of potential effects. While consultation is currently ongoing and HPO will be continuing consultation with BOEM regarding completion of the Section 106 review for the Project, HPO has determined that the proposed project constitutes an adverse effect on historic and archaeological resources. Pursuant to comments from HPO received March 22, 2024, BOEM has indicated that the full extent of potential adverse effects on archaeological resources associated with the proposed Project cannot be fully determined at this time.

9.34(b) discourages development that detracts from, encroaches upon, damages, or destroys the value of historic and archaeological resources. As discussed further in this document, "discouraged" coastal development may be permitted in cases where NJDEP considers the proposed use to be in the public interest and mitigating or compensating measures can be taken. As discussed previously in the Project Public Interest section of the Environmental Analysis Report accompanying the Federal Consistency Certification, the Projects are in the

public interest of the State of New Jersey as well as the regional and national public interest. Further, as discussed below, mitigation for adverse effects will be provided.

9.34(e) states that new development is conditionally acceptable in undeveloped areas near historic or archaeological resources provided the design of the development is compatible with the appearance of the historic and archaeological resources. Further, when in the area of undertaking, avoidance and protection of archaeological resources will occur. If not feasible or prudent, archaeological data recovery to mitigate the project impact will be required. Per the comments from HPO referenced above, BOEM is recommending a phased program of identification and evaluation, in consultation with the Section 106 consulting parties. The purpose of this phased program is to address the consideration of historic properties and archaeological resources at a later date in the development. HPO has concurred with this recommendation from BOEM. It is also important to note that Appendix G of the DEIS indicates that Atlantic Shores proposes and BOEM is recommending mitigation and monitoring measures to be undertaken by Atlantic Shores in order to first avoid, then minimize, and then mitigate impacts to historic and archaeological resources.

Pursuant to these same comments, HPO acknowledges and supports BOEM's ongoing efforts to consult with historic property owners to identify and fund appropriate mitigation measures for adversely affecting historic properties.

Mitigation is currently being worked out with BOEM and will be implemented via a Memorandum of Agreement ("MOA") between the consulting parties and is currently being negotiated. Execution of the MOA will complete the review process under Section 106. The MOA will resolve the Projects' adverse effects on historic and archaeological resources.

Impacts to Air Quality and Adverse Health Affects

Comment

The adverse health effects from wind turbine power are widely feared and not thoroughly studied. Increased air pollution from the construction and operation of the Projects will result.

Response

The Air Quality rule at N.J.A.C. 7:7-16.8(b) requires that coastal development conform to all applicable State and Federal regulations, standards and guidelines and be consistent with the strategies of New Jersey's State Implementation Plan (SIP). Consistency with the requirements of the Air Quality rule at N.J.A.C. 7:7-16.8 are discussed in detail in the Environmental Analysis Report accompanying the Federal Consistency Certification, however, some information from the Environmental Analysis Report is provided below.

By way of background, the Clean Air Act (CAA) amendments (42 U.S.C. 7401 et seq., Section 328) directed the United State Environmental Protection Agency (USEPA) to establish requirements to control air pollution from OCS oil- and gas-related activities along the Pacific, Arctic, and Atlantic Coasts and along the U.S. Gulf Coast offshore Florida, east of 87° 30' west longitude. The OCS Air Regulations (40 C.F.R. Part 55) establish the applicable air pollution control requirements, including provisions related to permitting, monitoring, reporting, fees, compliance, and enforcement for facilities subject to the CAA. These regulations apply to OCS sources that are beyond state seaward boundaries. Projects within 25 nautical miles (46 kilometers) of a state seaward boundary are required to comply with the air quality requirements of the nearest or corresponding onshore area, including applicable permitting requirements. Currently, OCS air permitting for the Projects is the responsibility of the USEPA. All necessary approvals will need to be obtained prior to construction of the Projects. Atlantic Shores has committed to complying with all applicable air quality regulatory requirements.

Information presented in the COP indicates that the Projects will result in a significant net decrease in harmful air pollutant emissions region-wide by displacing electricity from fossil fuel power plants. This is echoed in the DEIS. The DEIS indicates that the Projects would have minor adverse impact. Furthermore, A 2016 study, referenced in the DEIS, for the mid-Atlantic region found that offshore wind could produce measurable benefits measured in health costs and reduction in loss of life due to displacement of fossil fuel power generation. (Buonocore et al. 2016). However, air emissions as a result of increased vessel use will be highest during the 2 to 3 year construction period of the Projects. The vessels will be mainly localized to the WTA and ECCs which are a significant distance from shore. This distance from shore combined with winds will serve to limit the effect of vessels emissions on humans or sensitive environmental populations. Atlantic Shores has committed to avoiding, minimizing, and mitigating the effects

of air emissions that could occur during all phases of the Projects. Atlantic Shores intends to utilize engines manufactured and installed to meet or exceed emission control requirements. Vessel engines will use a combination of combustion and post-combustion controls to meet or exceed applicable marine engine standards. Atlantic Shores intends to utilize clean fuels to the maximum extent practicable and will implement BMPs at all phases of the Projects to minimize air emissions from vessel operations. Atlantic Shores has also committed to investigating the use of innovative tools and/or technologies to further minimize air emissions.

Impacts to Water Quality

Comment

Turbidity associated with the construction, maintenance, and decommissioning activities of the Atlantic Shores Projects will impact water quality. Furthermore, the Projects will involve the inadvertent release of drilling fluid as well as accidental releases of fuel, fluids, trash, and debris, however, an HDD Contingency Plan has not yet been created and submitted to NJDEP.

Response

The Water Quality rule at N.J.A.C. 7:7-16.3 aims to ensure that coastal development complies with the Federal Clean Water Act and/or State laws, rules and regulations. Consistency with the requirements of the Water Quality rule at N.J.A.C. 7:7-16.3 are discussed in detail in the Environmental Analysis Report accompanying the Federal Consistency Certification, however, some information from the Environmental Analysis Report is provided below.

As discussed in the COP, the Projects have been sited and designed to avoid and minimize adverse impacts to water quality within and proximate to the area of the Projects resulting from sediment suspension and transport and accidental release of hazardous materials. BMPs and operational controls will be implemented to minimize and mitigate potential impacts.

As discussed within the DEIS, it is anticipated that only minor and localized impacts to water quality would occur due to sediment resuspension, discharges, and accidental releases. However, Atlantic Shores has committed to measures to minimize impacts on water quality.

Anchor midline buoys on anchored construction vessels would be used, where feasible, to minimize disturbance to the seafloor and dynamically positioned vessels, and jet plow embedment would be utilized to the maximum extent practicable to minimize sediment disturbance and alteration during cable laying process. Accidental spill or release of oils or other hazardous materials are to be managed through Atlantic Shores's Oil Spill Response Plan (OSRP) that meets USCG and the BSEE requirements. HDD, while not proposed within federal waters, would be used to install the export cable to the landfall sites, and activities would be managed by an HDD Contingency Plan. HDD, which is proposed in and under New Jersey State waters and discussed in the State permit applications, will be discussed in detail in the written documentation supporting a decision on those applications. Vessels would be operated in a way that complies with regulatory requirements related to the prevention and control of discharged and accidental spills.

Impacts to tourism

Comment

The Atlantic Shores Project will have an adverse impact upon tourism and the Jersey Shore economy.

Response

As a result of the proximity of the Atlantic Ocean as well as the views associated with the shoreline, the New Jersey shore has been extensively developed for water-based recreation and tourism. The DEIS indicates that recreation and tourism contribute substantially to the economies of New Jersey's coastal communities, resulting in a multi-billion-dollar industry. It is assumed that the received comment pertains to the visual impact of the WTGs and OSSs on New Jersey's tourism industry. Therefore, the response below describes the anticipated impact to New Jersey's tourism industry resulting from the visibility of WTGs and OSSs located in Federal waters from New Jersey's coastal communities.

According to the DEIS, BOEM anticipates that the aviation warning lighting required for WTGs would be visible from some of New Jersey's beaches and coastlines and could have impacts on recreation and tourism in certain locations if the lighting influences visitor decisions in selecting coastal locations to visit. The impacts are anticipated to be long-term ranging from minor to major on sensitive onshore and offshore viewing locations, based on view distance and angle of view and assuming no obstructions. Atmospheric and environmental factors such as haze and fog would influence visibility and perception of hazard lighting from sensitive viewing locations. However, the portions of the New Jersey shoreline within the viewshed of the WTGs and OSSs have been extensively developed resulting in prevalent nighttime lighting. Nighttime views toward the ocean from the beach and adjacent inland areas are currently diminished by ambient light levels and glare of shorefront developments.

As discussed in this document previously, Atlantic Shores is considering use of ADLS, subject to FAA and BOEM approval, which could substantially reduce the amount of time that the aviation obstruction lights are actually illuminated. The synchronized flashing of the navigational lights from implementation of ADLS would result in shorter-duration night sky impacts on the seascape, landscape, and viewers. The shorter-duration synchronized flashing of the ADLS is anticipated to have reduced visual impacts at night as compared to the standard continuous, medium-intensity red strobe FAA warning system due to the duration of activation.

As a result, although lighting on WTGs would have a long-term impact, the impact is likely to be limited to individual decisions by visitors to the New Jersey shore and elevated areas, with less impact on the recreation and tourism industry as a whole.

Although likely not a consideration of the received comment, it is likely that noise generated from construction and installation, operation and maintenance, and decommissioning of the Projects in federal waters alone would only have localized, short-term, minor impacts on recreation and tourism.

Although the visual impact is predicted to be significant, the overall impact to tourism may vary. Studies and surveys that have evaluated the impacts of offshore wind facilities on tourism have identified variable reactions to offshore wind, with respondents having positive, neutral, or negative views of the effect that offshore wind infrastructure would have on their experience of coastal recreation. It is also important to note that construction of the new offshore structures in the Lease Area could provide new opportunities for offshore tourism by attracting recreational fishing and sightseeing, thereby providing a beneficial impact to New Jersey's tourism industry.

Lack of Baseline & Cumulative Impact Assessments

Comment

There is currently insufficient baseline data for Atlantic Shores or the NJDEP to analyze the effects of wide-scale, vast offshore wind energy projects, including the cumulative effects of these projects on the physical and biological ocean environment. Further, from this perspective, NJDEP 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 Projects' environmental impacts under the CZM rules, we have summarized the information submitted by Atlantic Shores and information developed by the NJDEP 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 with 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. In this instance, an analysis of incomplete and unavailable information is detailed in Appendix E of BOEM's DEIS. 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 for the portion of the proposed Projects in federal waters. 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. This process and BOEM's accompanying analysis is described in much further detail in the DEIS itself.

The NJDEP similarly applied this approach to utilize its own subject matter experts who considered scientifically available information and generally accepted scientific methodologies to evaluate impacts on resources under the Division's purview. As referenced within the Environmental Analysis Report accompanying the Federal Consistency Certification and prepared for the Projects' work in Federal waters, the Division has determined that the Projects are conditionally compliant and consistent with the applicable enforceable policies.

Impacts to Freshwater Aquifers

Comment

The public needs assurance that the Projects will not impact our freshwater aquifers, will not exacerbate the current sinking of the NJ shoreline related to the changing pressure dynamics of the underground aquifers, and will not trigger underwater landslides in the unstable continental shelf.

Response

This comment is beyond the NJDEP's purview as part of this Federal Consistency Certification review request. However, the COP does acknowledge that groundwater reservoirs underlie some areas of the onshore Projects' area. It should be noted that any water quality impacts affecting water supplies associated with the construction of the Projects within New Jersey State waters and onshore will be discussed in the documents accompanying decisions on the pending State permit applications.

Impacts to the Cold Pool

Comment

The potential impact of the Projects and other wind projects on the Cold Pool needs to be clearly understood before the Projects are authorized.

Response

While this comment is beyond the purview of the NJDEP, the NJDEP provides the following response utilizing information contained in BOEM's prepared DEIS.

As a matter of background and indicated in the COP, the Cold Pool is an oceanographic phenomenon referring to a bottom-trapped, cold, nutrient-rich pool that extends from Cape Cod, Massachusetts to Cape Hatteras, North Carolina and is located over the mid- and outer-shelf of the Mid-Atlantic Bight. The formation of the Cold Pool is driven by seasonal patterns in solar heating and wind and is not spatially uniform. As the Cold Pool is located along the seafloor, it is isolated from warming surface waters by the seasonal thermocline and creates habitat conditions that provide thermal refuge to colder water species. As the Cold Pool waters are nutrient-rich, when upwelled towards the surface, the waters can drive phytoplankton growth and high concentrations of particular organic matter in the water column. Recruitment and settlement of several cold water species, such as yellowtail flounder (*Pleuronectes ferruginea*) and red hake (*Urophycis chuss*), has been linked to the presence of the Cold Pool. This feature also provides temporary habitat for some northern species, like haddock (*Melanogrammus aeglefinus*) and Atlantic cod (*Gadus morhua*), which thrive in colder temperatures.

The DEIS notes that hydrodynamic disturbances from offshore wind structures may affect the Mid-Atlantic Cold Pool, however, the extent of potential impacts is uncertain as the Cold Pool's year-to-year dynamics are not fully understood. Offshore wind structures may reduce wind-forced mixing of surface waters, whereas water flowing around the foundations may increase vertical mixing. Changes in Cold Pool dynamics resulting from the construction of the Projects in federal waters could potentially cause changes in habitat suitability and fish community structure. Any impacts from hydrodynamic disturbances would be long term, persisting as long as the WTG foundations are in place. It is assumed that as offshore wind impacts on Cold Pool dynamics become more understood, appropriate measures will be undertaken in the future to minimize adverse impacts to this phenomenon.

Additionally, NJDEP and NJBPU recently awarded $97,462 to Rutgers University to study the effects of offshore wind turbines and foundations on the Mid-Atlantic Cold Pool. Researchers will use various analytical models and environmental data collected by Research and Monitoring Initiative (RMI)-funded Slocum undersea gliders in their evaluations.

Lack of Decommissioning Plan

Comment

A plan for decommissioning the Atlantic Shores Projects should be presented now and not at the time of decommissioning.

Response

Per federal regulations under 30 C.F.R. Part 285 and commercial Renewable Energy Lease OCS-A 0499, Atlantic Shores would be required to remove or decommission all facilities, projects, cables, and pipelines, and clear the seafloor of all obstructions created by the Projects. All foundations will need to be removed 15 feet or 4.6 meters below the mudline in accordance with the existing federal regulations. Atlantic Shores would be required to achieve complete decommissioning within 2 years of termination of the lease and either reuse, recycle, or

responsibly dispose of all materials removed. The final decommissioning plan for the Projects would required approval from the BSEE.

Given the Projects' anticipated 30 year lifespan and the development of technologies associated with offshore wind, it is anticipated that more beneficial decommissioning techniques will be developed that may not even exist now. This is a benefit to providing the decommissioning plan later in the Projects' operational lifetime. However, a conceptual plan of decommissioning has been provided in the COP. As stated in the COP, the decommissioning of the Projects will broadly occur in the reverse order of construction and all activities for decommissioning will be in accordance with the requirements specified in the lease agreement. Vessels used to complete offshore decommissioning activities will likely resemble those used during construction and installation and could include jack-up vessels, heavy-lift vessels, and support vessels such as tugboats and crew transfer vessels. Recycling of decommissioned materials will occur when possible. Any materials that cannot be recycled will be disposed of appropriately and at an approved onshore solid waste disposal facility to prevent any harmful effects to the environment.

Noise concerns

Comment

Noise from O&M, pile driving, cable laying and trenching, and vessel traffic could result in short--term impacts on demographics, employment, and economics due to impacts on commercial/for hire fishing businesses, recreational businesses, and marine sightseeing activities.

Response

While outside of NJDEP's purview under this Federal Consistency Certification request, a response utilizing assessments from the DEIS is provided below.

It is anticipated that out of character noise would be generated during certain phases of the Projects. The DEIS has concluded that impacts of offshore noise on marine businesses would be short term and localized. The DEIS notes that it is stated in the COP that all noise regulations would be complied with to the maximum extent practicable in order to minimize impacts on nearby communities. Additionally, Appendix G of the DEIS outlines mitigation measures proposed by Atlantic Shores. These include conducting construction during permitted hours, to the maximum extent practicable, when ambient noise levels are highest, utilizing BMPs, use of soft starts and gradual ramp-up procedures during construction activities such as pile-driving, and use of a noise-abatement system. BOEM is further proposing/recommending the preparation of a pile driving monitoring plan which would detail all plans and procedures for sound attenuation and an operational sound field verification plan to determine the operational noises emitted from the WTA.

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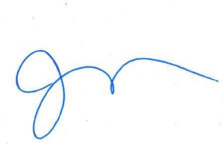

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