

# Appendix O: Scoping Report

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## Abbreviations and Acronyms

Acronym	Definition
AMMM	avoidance, minimization, mitigation, and monitoring
BOEM	Bureau of Ocean Energy Management
CEHA	Coastal Erosion Hazard Areas
COP	Construction and Operations Plan
CZMA	Coastal Zone Management Act
DACs	disadvantaged communities
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EMF	electromagnetic field
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
GW	gigawatts
HDD	Horizontal Directional Drilling
IOOS	Integrated Ocean Observing System
MMPA	Marine Mammal Protection Act
NAAQS	National Ambient Air Quality Standards
NCCOS	National Centers for Coastal Ocean Science
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NJDEP	New Jersey Department of Environmental Protection
NMFS	National Marine Fisheries Service
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NY Bight	New York Bight
NYS	New York State
NYS OPRHP	New York State's Office of Parks, Recreation and Historic Preservation
NYSDEC	New York State Department of Environmental Conservation
NYS DOS	New York Department of State
NYS DOT	New York State Department of Transportation
NYS DPS	New York State Department of Public Service
NYSERDA	New York State Energy Research & Development Authority
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act
PA	Programmatic Agreement
PAM	Passive Acoustic Monitoring
PEIS	Programmatic Environmental Impact Statement
PLAs	project labor agreements
ppm	parts per million
RMI	Research and Monitoring Initiative
ROW	right-of-way
RPDE	representative project design envelope
RWSC	Regional Wildlife Science Collaborative for Offshore Wind
SAV	submerged aquatic vegetation

Acronym	Definition
SCFWF	Significant Coastal Fish and Wildlife Habitats
SHPOs	State Historic Preservation Officers
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
VMS	Vessel Monitoring Systems
WEA	Wind Energy Area
WSR	Wild, Scenic, & Recreational Rivers
WTG	Wind Turbine Generator

## O.1 Introduction

On July 15, 2022, the Bureau of Ocean Energy Management (BOEM) published a Notice of Intent (NOI) to prepare the New York Bight (NY Bight) Programmatic Environmental Impact Statement (PEIS), which will analyze potential impacts from wind energy development activities in the NY Bight region. The initial 30-day public comment period opened on July 15, 2022. The period was extended to August 30, 2022. Public input was collected via regulations.gov (docket BOEM-2022-0034). Through October 7, 2022, BOEM received a total of 43 comments, all of which were unique.

The comments came from a variety of stakeholders including federal, State, non-governmental associations, and individual commenters. This report indicates the commenters that made particular arguments, as represented by footnotes following summary statements. The footnotes include the names of individuals and organizations. The footnotes following summary statements provide representative examples of commenters providing particular arguments, and are not meant to be exhaustive of each commenter providing a similar argument.

Public comments were analyzed using the CommentWorks<sup>®</sup> software product. As a first step, comments submitted to regulations.gov and received via email were downloaded and processed to be imported into CommentWorks. A hierarchical outline was developed to include key issues provided by BOEM staff. Analysts reviewed the comment letters, identifying the substantive excerpts within each submission (“bracketing”), and used the issue outline to associate each excerpt to the issue(s) to which it applies (“coding”). The comments were then summarized by issue as presented in this report. The full text of all public scoping comments received can be viewed online at <http://www.regulations.gov> by typing “BOEM-2022-0034” in the search field.

Table O-1 lists the commenters.

**Table O-1. Index of comment submissions sorted by submission number**

Submission ID	Commenter	Commenter Type
BOEM-2022-0034-0002	James Binder	Individual
BOEM-2022-0034-0003	Jeffrey Tyler	Individual
BOEM-2022-0034-0004	Borough of Seaside Park, Mayor John A Peterson, Jr.	Elected Official
BOEM-2022-0034-0005	Save Long Beach Island, Inc.	Environmental Advocacy and Other Public Interest Groups (NGOs)
BOEM-2022-0034-0006	United States Environmental Protection Agency (EPA)	Federal Agency
BOEM-2022-0034-0008	Kimberly Dreher	Individual
BOEM-2022-0034-0009	Borough of Beach Haven	Local and Regional Agencies
BOEM-2022-0034-0010	The American Waterways Operators	Energy/Non-Energy Industry or Other Associations
BOEM-2022-0034-0011	Twin Lights Historical Society	Individual
BOEM-2022-0034-0012	ECONcrete	Other

Submission ID	Commenter	Commenter Type
BOEM-2022-0034-0013	New England and Mid-Atlantic Fishery Management Councils	Local and Regional Agencies
BOEM-2022-0034-0014	American Saltwater Guides Association	Energy/Non-Energy Industry or Other Associations
BOEM-2022-0034-0015	Seafreeze Shoreside, Seafreeze Ltd.	Other
BOEM-2022-0034-0016	Robert Griffin	Individual
BOEM-2022-0034-0017	Citizens Campaign for the Environment	Environmental Advocacy and Other Public Interest Groups (NGOs)
BOEM-2022-0034-0018	New York Offshore Wind Alliance, Fred Zalcman	Energy/Non-Energy Industry or Other Associations
BOEM-2022-0034-0019	OW Ocean Winds East, LLC	Energy/Non-Energy Industry or Other Associations
BOEM-2022-0034-0020	World Shipping Council	Energy/Non-Energy Industry or Other Associations
BOEM-2022-0034-0021	New Jersey Offshore Wind Coalition	Environmental Advocacy and Other Public Interest Groups (NGOs)
BOEM-2022-0034-0022	Attentive Energy LLC	Energy/Non-Energy Industry or Other Associations
BOEM-2022-0034-0023	Rhode Island Coastal Resources Management Council	State Agency
BOEM-2022-0034-0024	The Nature Conservancy	Environmental Advocacy and Other Public Interest Groups (NGOs)
BOEM-2022-0034-0025	Massachusetts Office of Coastal Zone Management	State Agency
BOEM-2022-0034-0026	Aspen Institute, Esther Sosa, Swathi Manchikanti, Stephen Mushegan	Academic
BOEM-2022-0034-0027	Cape May County, NJ; Point O'Woods Association, Fire Island, NY	Local and Regional Agencies
BOEM-2022-0034-0028	Clean Ocean Action	Environmental Advocacy and Other Public Interest Groups (NGOs)
BOEM-2022-0034-0029	American Clean Power Association	Energy/Non-Energy Industry or Other Associations
BOEM-2022-0034-0030	Invenergy Wind Offshore LLC	Energy/Non-Energy Industry or Other Associations
BOEM-2022-0034-0031	New York State	State Agency
BOEM-2022-0034-0032	National Wildlife Federation et al.	Environmental Advocacy and Other Public Interest Groups (NGOs)
BOEM-2022-0034-0033	Community Offshore Wind	Environmental Advocacy and Other Public Interest Groups (NGOs)
BOEM-2022-0034-0034	Vineyard Offshore LLC	Energy/Non-Energy Industry or Other Associations
BOEM-2022-0034-0035	Responsible Offshore Development Alliance	Energy/Non-Energy Industry or Other Associations
BOEM-2022-0034-0036	Atlantic Shores Offshore Wind, LLC	Energy/Non-Energy Industry or Other Associations
BOEM-2022-0034-0037	New Jersey Department of Environmental Protection (NJDEP)	State Agency

Submission ID	Commenter	Commenter Type
BOEM-2022-0034-0038	Long Island Commercial Fishing Association	Energy/Non-Energy Industry or Other Associations
BOEM-2022-0034-0039	Ted Barten	Individual
BOEM-2022-0034-0040	United States Coast Guard	Federal Agency
BOEM-2022-0034-0041	National Marine Fisheries Services	Federal Agency
BOEM-2022-0034-0042	Fisheries Survival Fund	Environmental Advocacy and Other Public Interest Groups (NGOs)
BOEM-2022-0034-0043	Bluegreen Alliance	Environmental Advocacy and Other Public Interest Groups (NGOs)
BOEM-2022-0034-0044	National Park Service	Federal Agency
BOEM-2022-0034-0045	Wallace & Associates, Anonymous	Energy/Non-Energy Industry or Other Associations

NGO = non-governmental organization

## 0.1.1 General Comments

General comments are discussed in this section.

### 0.1.1.1 General Support

One commenter expressed general support for the NY Bight offshore wind project and said that the currently available wind turbine generators (12–14+ megawatts [MW]) coupled with decades of European construction and operating experience allows for competitive pricing and strong capacity factors. The commenter added that successful pilot programs in United States waters (Block Island, Dominion) provide additional supportive data and experience.<sup>1</sup>

### 0.1.1.2 General Opposition

The commenter expressed opposition to the current location and size of the NY Bight project.<sup>2</sup>

### 0.1.1.3 Other General Topics

One commenter recommended using the United States Environmental Protection Agency's (EPA's) NEPAAssist web-based application tool for the project as well as for future projects to facilitate the environmental review process and aid in project planning. The commenter said that NEPAAssist is a useful tool for identifying environmental resources in the area and could indicate potential environmental issues at the earliest stage of project development.<sup>3</sup>

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<sup>1</sup> T. Barten.

<sup>2</sup> K. Dreher.

<sup>3</sup> EPA.

## O.2 Purpose and Need

Comments associated with the Proposed Action’s purpose and need are discussed in this section.

### O.2.1 Purpose and Need for Action

Approximately 10 commenters provided feedback on the purpose and need for the Proposed Action.

Several commenters listed the threat climate change poses to the natural environment, including fisheries, as a reason for developing offshore wind in the NY Bight area. The commenters further stated that offshore wind would help achieve the Biden Administration’s clean energy goals, for example deploying 30 gigawatts (GW) of offshore wind by 2030.<sup>4</sup>

One commenter expressed support for the purpose of the Proposed Action in the PEIS “to identify, analyze, and adopt, as appropriate, issues, degree of potential impacts, and avoidance, minimization, mitigation, and monitoring (AMMM) measures” but expressed concern that the need is framed within the context of reaching various States’ goals for offshore wind generation.<sup>5</sup> A commenter said that deferring to Executive Orders as the “purpose and need” for offshore wind development in the Bight, rather than identifying the scientific need for these projects and how they would fulfil it, demonstrates that BOEM’s course of action is already foreclosed. The commenter stated that following a course in such a predetermined way violates the National Environmental Policy Act (NEPA). The commenter stated that rather than relying on Executive Order goals to justify the development in question, the PEIS should include a thorough greenhouse gas emissions analysis for the entire life cycle of these projects, especially with respect to how long it would take for the projects to offset the amount of greenhouse gas emissions that would be required to construct, operate, maintain, and decommission them.<sup>6</sup>

One commenter wrote that the PEIS should clearly explain the rationale for a tiered environmental review process for NY Bight offshore wind development and that both the purpose and need along with the scope of the analysis must be clearly stated for a meaningful review process.<sup>7</sup> Another commenter said that the purpose and need of offshore wind is to provide needed power and to reduce greenhouse gas emissions but that this has already been done or is in the process of happening in the United States. The commenter stated that this fact needs recognition in the PEIS.<sup>8</sup>

### O.2.2 Regulatory Jurisdiction/Statutory Authority

Three commenters provided feedback on BOEM’s regulatory jurisdiction or statutory authority.

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<sup>4</sup> Atlantic Shores Offshore Wind, LLC; New Jersey Offshore Wind Coalition; Citizens Campaign for the Environment; R. Griffin; Attentive Energy LLC; Community Offshore Wind.

<sup>5</sup> Responsible Offshore Development Alliance.

<sup>6</sup> Clean Ocean Action.

<sup>7</sup> EPA.

<sup>8</sup> J. Binder.



One commenter disagreed with BOEM making the fulfillment of State renewable energy goals the primary goal of NY Bight development. The commenter said that BOEM’s current approach is backwards, stating that it subordinates a federal, statutorily authorized process to State legislation. The commenter stated that the Purpose and Need for the Proposed Action should thus be revised.<sup>9</sup> Contrarily, a commenter said that, in the New York State Public Service Law Article VII review, the New York State Department of Public Service (NYSDPS) would be reviewing the proposed facility design for conformity with criteria adopted by the NYSDPS for electromagnetic field (EMF) levels “at right-of-way (ROW) edge.”<sup>10</sup> Another commenter generally stated that BOEM has authority to regulate permitting in the outer continental shelf.<sup>11</sup>

### O.2.3 Scope of the PEIS

Approximately 10 commenters listed additional factors that should be included in the scope of the PEIS, including:

- State commitments (project labor agreements [PLAs], prevailing wage standards, monitoring of wildlife, etc.), as they are formative to project development.<sup>12</sup>
- Creation of quality, family-sustaining, union jobs throughout the lifetime of the project.<sup>13</sup>
- Expansion of domestic manufacturing along a robust domestic supply chain.<sup>14</sup>
- Delivery of community benefits with attention to stakeholder engagement.<sup>15</sup>
- Protection of wildlife and marine ecosystems by avoiding, minimizing, mitigating, and monitoring impacts over the course of site assessment and project development, including through the utilization of the best available science and data.<sup>16</sup>
- Inclusion of an impact analysis that is comprehensive, transparent, objective, and quantitative, that accounts for uncertainty and addresses data gaps, considers reasonable alternatives and mitigation, assesses cumulative impacts, and requires monitoring and adaptive management.<sup>17</sup>
- Expansion of the PEIS to include the New Jersey Wind Energy Area (WEA), defined by lease areas Outer Continental Shelf (OCS) A–0498, 0532, A–0499, and A-0549.<sup>18</sup> With this expansion of the PEIS, the commenter said that additional mitigation measures should be discussed, including the

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<sup>9</sup> Seafreeze Shoreside, Seafreeze Ltd.

<sup>10</sup> New York State.

<sup>11</sup> Aspen Institute.

<sup>12</sup> Bluegreen Alliance.

<sup>13</sup> Bluegreen Alliance.

<sup>14</sup> Bluegreen Alliance.

<sup>15</sup> Bluegreen Alliance.

<sup>16</sup> Bluegreen Alliance.

<sup>17</sup> National Wildlife Federation et al.

<sup>18</sup> Borough of Beach Haven; Save Long Beach Island, Inc.; Fisheries Survival Fund.

consideration of the project's visible impact on historic properties on Long Beach Island, New Jersey; consideration of the project's impact on the State's coastal zone and its conflicts with the visual resource protection elements of the State's coastal zone management rule; and consideration of the impact of operational turbine noise on fin and humpback whales that frequent the inner part of the project area.<sup>19</sup>

- Expansion of the PEIS to include alternative WEAs.<sup>20</sup>
- Inclusion of substantive programmatic AMMM measures to address issues including the cumulative impacts of construction and operational noise on the migration of the North Atlantic right whale, the cumulative impact of multiple vessel surveys, and the cumulative impact on migratory birds.<sup>21</sup>
- Inclusion of the following items when evaluating impacts on the human environment and on a range of onshore components:<sup>22</sup>
  - The New York State Department of Transportation (NYSDOT) Utility Accommodation Plan.
  - The location of State highway ROW boundaries and road classifications for onshore planning of transmission line siting.
  - Coordination between local, State, and federal partners when transportation planning.
  - Consideration of the siting pathway options for the transmission line location when determining the location of points of interconnection.
  - Acknowledgement of the role of NYSDOT in evaluating transportation as a component of the human environment and involve the New York State transportation real property and engineering experts in all proposals for onshore transmission siting impacting State roads and highways.
  - Adherence to the NYSDOT Standard Specifications when installing utilities within a State highway ROW.
  - Recognition that any proposal to locate a transmission facility within a State highway ROW should minimize impacts on highway use, safety, maintenance, aesthetics, and future highway improvements.
- Consideration of impacts to National Oceanic and Atmospheric Administration (NOAA) trust resources from the full build-out of the six lease areas and a holistic, ecosystem approach to considering AMMM measures to reduce those impacts. This includes fully evaluating interactions among all impact-producing factors and associated responses by marine trust resources,

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<sup>19</sup> Save Long Beach Island, Inc.

<sup>20</sup> Save Long Beach Island, Inc.

<sup>21</sup> Save Long Beach Island, Inc.

<sup>22</sup> New York State.

oceanographic and atmospheric processes, and fishing activities across all lease areas within the NY Bight. Specifically, the commenter recommended that the PEIS consider impacts on ocean circulation, citing Department of the Interior guidance. The commenter also added that the PEIS should consider impacts on affected resources and fishery operations at an initial stage and that such consideration will necessitate the development of alternatives to a full build-out of the six lease areas.<sup>23</sup>

- Distinguishing carefully and realistically at the PEIS level between impacts that are “moderate to major” (for which project-specific analysis is required), and those that are “negligible to minor” (for which a programmatic analysis may suffice).<sup>24</sup> Addressing the appropriateness and relative importance of the selected scale against which impacts are being assessed, in terms of both temporal and spatial stressors and receptors.<sup>25</sup>
- Consideration of the lease areas being located in one of the prime hurricane zones in the United States<sup>26</sup>

#### O.2.4 Other Comments on the Purpose and Need for the Proposed Action

Six commenters provided other comments on the purpose and need for the Proposed Action.

One commenter generally expressed support for the goals and intent of the PEIS process.<sup>27</sup> Another commenter encouraged BOEM to prepare supporting documentation and studies that could quantify the monetary value of cleaner energy sources, good-paying jobs, and historic investments in American energy-supply chains, as well as account for losses that result without full utilization of the lease area in question. The commenter recommended that BOEM incorporate this information into the Purpose and Need of the PEIS.<sup>28</sup>

A commenter expressed concern that BOEM has no intent to disapprove a project or part of a project if its Purpose and Need is to fulfill a developer’s power purchase agreement with a utility or to fulfill the nameplate capacity of a project as submitted in the Construction and Operations Plan (COP). The commenter further stated that BOEM must rescind its recent NEPA standardization and conform its process, including the NY Bight PEIS process, to a full consideration of alternatives, including those that might not meet a developer’s proposed nameplate capacity or speculative power purchase agreement.<sup>29</sup> Another commenter said that the PEIS should provide a detailed discussion on the goals of the six NY Bight lessees and the renewable energy goals of New York and New Jersey that the six lease areas are designed to serve. The commenter remarked that the applicants’ goals form the basis (along with other

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<sup>23</sup> National Marine Fisheries Services.

<sup>24</sup> Fisheries Survival Fund.

<sup>25</sup> The Nature Conservancy.

<sup>26</sup> Borough of Seaside Park.

<sup>27</sup> OW Ocean Winds East, LLC.

<sup>28</sup> Atlantic Shores Offshore Wind, LLC.

<sup>29</sup> Seafreeze Shoreside, Seafreeze Ltd.

factors) for BOEM’s Purpose and Need for the Proposed Action and are used as screening criteria for alternatives to be analyzed in detail in a project-specific Environmental Impact Statement (EIS).<sup>30</sup>

One commenter said that BOEM must evaluate the tradeoffs associated with various levels of power generation against the economic and cultural importance of regional fisheries in this PEIS. Pursuing too narrow an analytical approach in this PEIS, the commenter wrote, would predetermine all project parameters and limit the range of possible mitigation measures when a project-specific EIS is conducted, thus resulting in many otherwise appropriate mitigation measures being excluded from consideration at any point in the process.<sup>31</sup> Regarding BOEM’s *Process for Identifying Alternatives for Environmental Reviews of Offshore Wind COPs pursuant to the National Environmental Policy Act NEPA*, published in June of 2022, a commenter expressed concern that BOEM changed the wording of a document that would be the basis for the purpose and need for an EIS for any COP.<sup>32</sup>

## O.3 Proposed Action and Alternatives

Comments associated with the overall Proposed Action and its alternatives are discussed in this section below.

### O.3.1 Proposed Action’s Adoption of AMMM Measures for the NY Bight Lease Areas

Approximately 20 commenters listed AMMM measures that they said should be adopted or considered for the NY Bight lease areas, such as:

- Those that incorporate ecological design elements, such as the use of recycled or “environmental concrete,” into offshore wind infrastructure as they significantly increase species settlement, richness, and abundance.<sup>33</sup>
- Those that minimize impacts on benthic habitats, pelagic habitats, and fisheries. The commenter stated that benthic habitat impact minimization should remove high value habitat areas, identified by surveys and mapping areas from consideration of development; that pelagic habitat impact minimization analyze an alternative that would consider the impact of the full build-out development along with other proposed offshore wind development in the region on pelagic habitats in the NY Bight, including the Mid-Atlantic Cold Pool; and that fisheries impact minimization should consider consistent wind turbine generator spacing across lease areas to increase the likelihood that fishing can still occur. Also listed were those that coordinate and consolidate routes for export cables, that ensure all export cable routes for interconnections with the grid avoid crossing through estuaries and embayments, that consider all feasible avoidance and minimization measures in the project design and incorporate all available AMMM measures as mandatory

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<sup>30</sup> Invenegy Wind Offshore LLC.

<sup>31</sup> Responsible Offshore Development Alliance.

<sup>32</sup> Long Island Commercial Fishing Association.

<sup>33</sup> EConcrete.

conditions of COP approval, or that incorporate no avoidance and minimization alternatives or AMMM measures.<sup>34</sup>

- Those that primarily avoid negative impacts on valuable fisheries, as opposed to a reliance on mitigation techniques to be employed after lease development.<sup>35</sup>
- Those that first address different options for full build-out and that incorporate up-front avoidance and minimization approaches (e.g., high value habitat that should be avoided). The commenter recommended that these alternatives consider a range of AMMM measures that provide minimal to maximum feasible protection. Further, thorough evaluations of available data on existing resources could help facilitate optimal project design that avoids and minimizes impacts on trust resources throughout the NY Bight while also achieving energy generation goals. The commenter also recommended that the PEIS' Proposed Action be described as the “*full build out* of all six lease areas while incorporating AMMMs” and that mitigation measures be evaluated for their efficacy under each alternative considered by the PEIS.<sup>36</sup>
- Those that create measurable criteria for excluding areas from development when the risk to the physical and human environment exceeds acceptable thresholds, and apply those on regional and project-specific bases in the NY Bight and all regions.<sup>37</sup>
- Those that are technically and commercially feasible, and thus reasonable under NEPA, cautioning that combined AMMM measures should be examined for whether they would cumulatively threaten the viability of projects.<sup>38</sup>
- Those that assess the impacts of project design ranges for each lease area. Further, BOEM should apply this approach for all impact assessments to ensure that the PEIS assessments and AMMM measures capture the reality of the wide range of scenarios.<sup>39</sup>
- Those that include the mitigation considerations identified in BOEM’s draft Fisheries Mitigation Guidelines in the PEIS, especially those mitigation guidelines set forth in subparts B (Project Siting, Design, Navigation, and Access) and D (Environmental Monitoring) of the Fisheries Mitigation Guidelines.<sup>40</sup>
- Those that consider larger turbine sizes to reduce windfarm footprints, that complement offshore wind structures with nature inclusive designs to further enhance the artificial reef effect, that

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<sup>34</sup> National Marine Fisheries Services.

<sup>35</sup> Fisheries Survival Fund.

<sup>36</sup> National Marine Fisheries Services.

<sup>37</sup> Responsible Offshore Development Alliance.

<sup>38</sup> Vineyard Offshore LLC.

<sup>39</sup> OW Ocean Winds East, LLC.

<sup>40</sup> Fisheries Survival Fund.

ensure the ability of recreational anglers to fish within turbine arrays, and that standardize environmental monitoring across projects.<sup>41</sup>

- Those that incorporate the needs and decision-making of cooperating agencies, that evaluate the effect and effectiveness of programmatic AMMM measures, and that reflect the best available scientific and technological information.<sup>42</sup>
- Those that require an adaptive management plan, whereby if environmental impacts are substantially different than anticipated, operational modifications could be evaluated and executed.<sup>43</sup>

One commenter said that BOEM should refrain from adopting any AMMM measures through this programmatic approach that would jeopardize the Country's ability to address the climate crisis. The commenter suggested that BOEM adhere to its new NEPA alternatives screening criteria in developing the AMMM measures, and recommended that each AMMM measure be technically and economically practical and not undermine any project's future specific purpose and need statements. In particular, the commenter cited a BOEM provision on the prevention of waste and stated that alternatives and AMMM measures should be evaluated based on whether and to what extent they would have foreseeable impacts on the energy generation potential of an offshore wind lease. Furthermore, the commenter stated that BOEM's alternative analysis should exclude project design alternatives and instead focus on the implementation of AMMM measures.<sup>44</sup> A commenter remarked that in order to determine if the subsequent site-specific COPs would have greater, equal, or fewer impacts than those analyzed in the PEIS, it is important that the programmatic AMMM measures provide a metric that allows for a comparison of a project that employs the best practice AMMM measures (lowest impact) and the No Action Alternative (highest impact).<sup>45</sup> Another commenter recommended redefining the Proposed Action to include the development of the lease areas with no AMMM measures and include the implementation of different AMMM measures in other alternatives.<sup>46</sup>

Regarding AMMM measures, one commenter stated that BOEM should focus primarily on moderate or major impacts in individual COPs instead of duplicating analyses in areas that have been determined to cause only minor impacts or no impacts in the EIS.<sup>47</sup> A commenter said that each AMMM measure should be analyzed separately, as individually defined alternatives or sub-alternatives, as well as cumulatively. The commenter wrote that this would allow the public to better understand the impact each measure has on mitigation, particularly if individual projects propose using only a subset of the measures in a COP. Further, the commenter remarked that development of the AMMM measures from the PEIS should serve as a baseline for the minimal level of mitigation expected by a lessee for any

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<sup>41</sup> American Saltwater Guides Association.

<sup>42</sup> Invenergy Wind Offshore LLC.

<sup>43</sup> New York State.

<sup>44</sup> American Clean Power Association.

<sup>45</sup> National Wildlife Federation et al.

<sup>46</sup> EPA.

<sup>47</sup> Citizens Campaign for the Environment.

project. Merely adopting the programmatic measures is not expected to be sufficient to remedy the impacts from offshore wind development and should not be viewed as a cap for any mitigation measure, regardless of the scale of the impact: negligible, minor, moderate, or major. The commenter added that a future PEIS should be provided prior to lease auctioning because of the importance of siting to environmental impacts and that future, project-specific alternative analyses should be conducted in EISs rather than environmental assessments. The commenter also expressed disappointment that the PEIS did not include Empire Wind, Atlantic Shores, and Ocean Wind projects; the commenter stated that these projects are in the immediate region and that they should include programmatic AMMM measures similar to any adopted for the NY Bight because of common cumulative impacts.<sup>48</sup>

One commenter stated that BOEM's AMMM analysis should be sufficiently flexible as to avoid foreclosing the use of AMMM measures that may evolve after the PEIS analysis is complete but prior to project implementation, and that would also achieve the same or lesser level and type of impacts. The commenter requested that BOEM ensure that, through consultation with the lessees, the AMMM measures evaluated will be both technically and economically feasible.<sup>49</sup>

A commenter remarked that BOEM should provide clarity in the PEIS on how it would determine whether a particular programmatic AMMM measure applies to a given NY Bight project. The commenter also recommended that BOEM identify required mitigation outcomes and representative examples of approaches that could serve to mitigate project impacts, without mandating specific technologies as programmatic AMMM measures.<sup>50</sup> One commenter expressed concern that BOEM would adopt the current Draft Fisheries Mitigation Guidance document as an AMMM measure in the upcoming NY Bight PEIS as a way to downgrade major fisheries impacts. The commenter stated that this guidance document is procedurally and substantively deficient and referred to its comment on the Draft Fisheries Mitigation Guidance document for further detail.<sup>51</sup> A commenter recommended that BOEM use this PEIS to adopt AMMM measures based on the forthcoming final Guidance for Mitigating Impacts of Offshore Wind Energy Projects on Commercial and Recreational Fisheries.<sup>52</sup> Another commenter expressed concern that the Draft Guidance emphasizes compensation too heavily and that AMMM measures for the NY Bight should be analyzed individually in order to prioritize avoidance of impacts.<sup>53</sup>

### **O.3.2 Comments on Reasonable Alternatives**

Seven commenters recommended alternatives for BOEM or developers to consider or implement in offshore wind development in the NY Bight area, including:

- Alternatives for Manufacturing, Staging, and Assembly

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<sup>48</sup> Responsible Offshore Development Alliance.

<sup>49</sup> Community Offshore Wind.

<sup>50</sup> Attentive Energy LLC.

<sup>51</sup> Seafreeze Shoreside, Seafreeze Ltd.

<sup>52</sup> New England and Mid-Atlantic Fishery Management Councils.

<sup>53</sup> Responsible Offshore Development Alliance.

- Evaluate available alternatives for staging and assembly of offshore wind components including utilizing jack-up barges and platforms in the NY Bight.<sup>54</sup>
- Alternatives for Appurtenant Structures
  - Identify scenarios for co-locating with offshore infrastructure such as existing and future transmission infrastructure, telecommunications, and battery storage projects.<sup>55</sup>
- Alternative Submarine Cable Configurations
  - Evaluate co-locating submarine cables to minimize impacts on sensitive environmental resources, including but not limited to, complex benthic habitats, saltmarshes, and submerged aquatic vegetation (SAV).<sup>56</sup>
- Alternative Turbine Layouts
  - Evaluate a range of turbine layout scenarios to ensure sufficient energy generation and promote co-existence with fishing industries.<sup>57</sup>
- Alternative Habitat Impact Minimization Measures
  - Include a conceptual habitat impact minimization alternative to avoid highly sensitive and significant habitat types and possibly avoidance areas.<sup>58</sup>
- Alternative Construction Methodologies
  - Evaluate alternative offshore installation methodologies that allow simultaneous trenching and cable lay to minimize impacts on water quality and benthic habitat.<sup>59</sup>
- Locating the project in the Hudson South Call Area, which is 30 to 57 miles offshore, where turbines would not be visible.<sup>60</sup>
- Land based alternatives, which the commenter characterized as the most rapid and efficient efforts to achieve energy efficiency, resource conservation, and global warming mitigation, and to prevent the Jersey Shore ocean from becoming a “dumping ground.”<sup>61</sup>

One commenter said that an alternatives analysis must consider a pilot project. The commenter stated that a small, local pilot project that uses the proposed technology and could be robustly evaluated

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<sup>54</sup> New York State.

<sup>55</sup> New York State.

<sup>56</sup> New York State.

<sup>57</sup> New York State.

<sup>58</sup> New York State.

<sup>59</sup> New York State.

<sup>60</sup> K. Dreher.

<sup>61</sup> Borough of Seaside Park.



before, during, and after construction is the only way to address shortcomings in the project (e.g., a need for quantitative and qualitative scientific observation, logistical planning, clearance of military hazards) and begin the path toward responsible development of offshore wind energy in the NY Bight waters through a process that reflects fair, responsible, and good governance. The commenter stated that research on the impacts of wind development in regions other than the NY Bight should not be relied upon because of the unique characteristics of the NY Bight. The commenter provided descriptions of conditions in other wind development regions that differ from those of the NY Bight, stating that postponing development in the NY Bight would allow more time to recover unexploded munitions and mustard gas.<sup>62</sup> Similarly, another commenter said that a limited test project alternative must be considered. A test project would facilitate gathering information on benefits and impacts before a large project is implemented.<sup>63</sup>

A commenter requested that BOEM apply the screening criteria for the alternatives described in its 2022 “Process for Identifying Alternatives for Environmental Reviews of Offshore Wind Construction and Operation Plans pursuant to the National Environmental Policy Act (NEPA)” guidance in determining the reasonable range of alternatives for the PEIS. The commenter stated that by defining a reasonable approach to the alternatives analysis, the PEIS could appropriately reflect BOEM’s extensive process of analyzing and leasing the WEA, preserve the goals of the applicants who have secured leases based on investment-backed expectation of wind energy output, and identify proposed and alternative AMMM measures that adequately address environmental impacts.<sup>64</sup>

One commenter said that the PEIS should acknowledge and consider the considerable pre-auction reduction in the NY Bight WEAs, given that prior reduction of any alternatives that further significantly reduce site utilization would both be unnecessary and run counter to federal and State clean energy goals. The commenter stated that PEIS alternatives should maximize site utilization in order to preserve project viability and added that BOEM should seek buy-in from other agencies to minimize environmental review work to be conducted after the PEIS stage.<sup>65</sup>

### **O.3.3 Comments on No Action Alternative**

Five commenters provided feedback on the No Action Alternative.

One commenter recommended that BOEM implement the No Action Alternative until all relevant and essential scientific information has been accumulated, thoroughly reviewed, and disseminated to the public.<sup>66</sup>

A commenter said that BOEM’s No Action Alternative should acknowledge the unsettling effects of a project denial on cumulative economic benefits due to disruption in supply chain investments.<sup>67</sup> Another

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<sup>62</sup> Clean Ocean Action.

<sup>63</sup> J. Binder.

<sup>64</sup> Invenergy Wind Offshore LLC.

<sup>65</sup> OW Ocean Winds East, LLC.

<sup>66</sup> Borough of Seaside Park.

<sup>67</sup> American Clean Power Association.

commenter stated that a robust analysis of the benefits of clean energy should be included in all alternatives and be compared to the impacts (air quality, water quality, etc.) that would flow from fossil fuel use inherent in the No Action Alternative.<sup>68</sup>

One commenter remarked that the No Action Alternative is supposed to serve as a comparative tool for the Proposed Action, but currently allows for little understanding of efficacy of the AMMM measures of the Proposed Action. The commenter recommended redefining the Proposed Action to include the development of the lease areas with no AMMM measures and include the implementation of different AMMM measures in other alternatives.<sup>69</sup> Another commenter said that the PEIS must provide a comprehensive, transparent, and fair analysis of the potential risks and impacts associated with offshore wind energy development activities in the New York and New Jersey Bight, and thus, from the outset, should include an alternatives analysis that contains both a pilot project and a true No Action Alternative.<sup>70</sup>

## O.4 Resource and Stressor Topics

Comments associated with individual resources and impacts are discussed this section.

### O.4.1 Air Quality

Five commenters provided feedback on air quality issues.

A couple of commenters recommended that the PEIS include National Ambient Air Quality Standards (NAAQS) to better understand the level of air pollutants impacts of wind energy development.<sup>71</sup> Similarly, a few commenters asked that the PEIS consider the impacts of “construction, operation & maintenance, and decommissioning” of wind energy projects on air quality and that these impacts be extensively reviewed as part of the PEIS.<sup>72</sup>

One commenter recommended that preparation of the PEIS include consultation with the EPA and the New York State Department of Environmental Conservation (NYSDEC) in order to include the most accurate information about air quality impacts. The same commenter asked that the environmental impact assessment include an evaluation of changes to air circulation from wind turbines and that the PEIS describe its compliance with federal and State emissions and air quality regulations. They also listed a number of air emission controls for BOEM to consider, including parts per million (ppm) restrictions on diesel generators, ppm restrictions on vessel fuels, and vessel and boiler standards.<sup>73</sup>

Another commenter recommended that the PEIS consider sources of pollution that would impact air quality or violate federal or State ambient air quality standards. The same commenter asked that the

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<sup>68</sup> OW Ocean Winds East, LLC.

<sup>69</sup> EPA.

<sup>70</sup> Clean Ocean Action.

<sup>71</sup> New York State; EPA.

<sup>72</sup> Borough of Seaside Park; New York State; EPA.

<sup>73</sup> New York State.

PEIS include options that “explore diesel controls, cleaner fuel and construction practices” or other technology that reduces emissions from wind energy development.<sup>74</sup>

One commenter asserted that BOEM should focus its analysis of the climate benefits of offshore wind development and stated that the benefits from substituting clean energy for fossil fuel generation apply to BOEM’s air quality analyses.<sup>75</sup>

#### **O.4.2 Areas of Special Concern**

Five commenters provided feedback on areas of special concern.

A couple of commenters discussed a proposal to designate the Hudson Canyon a National Marine Sanctuary. Specifically, one commenter asserted that BOEM should prepare for the impacts of such a designation, especially with possible changes to vessel traffic and fishing activity in the surrounding areas, and account for such changes in the PEIS.<sup>76</sup> Another commenter mentioned the ongoing process of designation and urged BOEM to work with the NOAA, New York and New Jersey, and Tribal Nations to “identify boundaries that avoid overlap with existing wind leases.”<sup>77</sup>

One commenter asked that BOEM enforce restrictions on construction and operations of wind energy development on certain areas where migration, spawning events, and other marine processes take place at certain times of the year. The same commenter also asked that BOEM “implement the precautionary principle” for areas of sensitive habitat, spawning areas, and access management areas for fisheries.<sup>78</sup>

One commenter asserted that the PEIS should account for and investigate the impacts on waterways and coastal habitats caused by all stages of wind energy development and went on to cite a number of areas of particular importance, including estuaries in New York and New Jersey and a few Research Reserves.<sup>79</sup>

One commenter discussed both the Holgate Wildlife Refuge and the Forsythe National Wildlife Refuge as areas of particular importance to bird species and criticized the lack of studies on the impact of the proposed project on such refuges.<sup>80</sup>

#### **O.4.3 Avoidance, Minimization, Mitigation, and Monitoring (AMMM) Measures (Including Stipulations)**

Approximately 10 commenters offered both general and issue-specific comments on AMMM measures.

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<sup>74</sup> EPA.

<sup>75</sup> American Clean Power Association.

<sup>76</sup> Fisheries Survival Fund.

<sup>77</sup> New Jersey Offshore Wind Coalition.

<sup>78</sup> Responsible Offshore Development Alliance.

<sup>79</sup> Clean Ocean Action.

<sup>80</sup> K. Dreher.

#### O.4.3.1 General

A couple of commenters urged BOEM to adopt an “adaptive management” framework or process for AMMM measures in order to ensure that these measures can account for technology and information changes.<sup>81</sup> One of the commenters asserted that BOEM should use a “step-wise” approach that considers avoidance of impacts before mitigation and, at last resort, compensation. In the event that compensation is necessary, the commenter recommended that compensation be implemented on a regional scale in order to allow for in-kind and onsite measures to be considered for difficult-to-replace resources. The commenter cited its own guidance as further indicating that offsetting mitigation provisions should be generous to allow for uncertainty in the mitigation’s efficacy.<sup>82</sup>

A few commenters debated whether AMMM measures might be more effective on a regional instead of a project-specific level: one commenter stated that BOEM could evaluate at which scale AMMM measures would be more effective,<sup>83</sup> another asserted that compensatory mitigation should be implemented on a regional scale,<sup>84</sup> and another asserted that conducting evaluations of the effectiveness of different AMMM measures could be done on a “project-specific basis.”<sup>85</sup>

One commenter encouraged BOEM to support environmental monitoring plans in coordination with federal, State, and industry partners and require data from those plans to be made publicly available.<sup>86</sup> Another commenter asserted that offshore wind should be developed in a manner that is environmentally responsible, mitigates impacts on wildlife, engages involved stakeholders, and continuously monitors impacts on habitats and ocean wildlife.<sup>87</sup> Yet another commenter asserted that AMMM measures will in turn inform COP risk mitigation for addressing important environmental and economic issues during offshore wind development.<sup>88</sup>

A commenter discussed BOEM’s intent to focus on impacts from “representative projects” rather than speculation of potential impacts, asserting that this process is a better way to identify AMMM measures.<sup>89</sup>

A commenter listed a number of guidelines for what they believe AMMM measures should look like, such as:

- AMMM measures should be “methodologies, not mandates.”
- AMMM measures should be grounded in best available science and best practices informed by developer collaboration and through State and regional initiatives.

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<sup>81</sup> National Marine Fisheries Services; The Nature Conservancy.

<sup>82</sup> National Marine Fisheries Services.

<sup>83</sup> New York State.

<sup>84</sup> National Marine Fisheries Services.

<sup>85</sup> Community Offshore Wind.

<sup>86</sup> Responsible Offshore Development Alliance.

<sup>87</sup> Bluegreen Alliance.

<sup>88</sup> Aspen Institute.

<sup>89</sup> The Nature Conservancy.

- AMMM measures should attempt to support appropriate alternatives and address identified risks, effects, and impacts.
- AMMM measures should attempt to balance efficacy, intent, and safety.

The commenter encouraged BOEM to coordinate with different agencies to design AMMM measures.<sup>90</sup>

One commenter urged BOEM to use the PEIS to “assess the efficacy of AMMMs” and identify other appropriate AMMM measures.<sup>91</sup>

One commenter recommended that BOEM use the PEIS scoping process to inform their mitigation approach, and stated that monitoring and mitigation activities may occur outside of the lease area, especially for species that are highly mobile.<sup>92</sup> Another commenter urged BOEM to require further monitoring for areas in which data is sparse.<sup>93</sup>

#### O.4.3.2 Issue-Specific

A few commenters discussed AMMM measures specific to construction and operational impacts:

- A commenter encouraged the development of standards regarding foundation design and cable installation to ensure that impacts on protected species are minimized. They also asked that standards for night and low-visibility construction and protocols for coordination between project activities designed to avoid the generation of sound fields and other construction and operational impacts be required, schedules for construction and drilling be adapted to avoid impacts on migratory and time of year dependent species, and that “third-party protected species observers” be required to help implement mitigation and monitoring measures.<sup>94</sup>
- The same commenter also encouraged several monitoring measures related to construction and operation of wind energy development, including monitoring impacts of noise levels during construction, operation, and maintenance; impacts of the physical presence of turbines; and displacement of and changes to fishing activity around the lease areas, among others. They also urged consideration of multiple project designs that can better minimize impacts on important resources, such as changes to foundations and cable burying procedures, and recommended that BOEM develop standards for determining when foundation designs that do not rely on pile-driving would be appropriate. Additionally, the commenter recommended that BOEM require routine clean ups of ghost gear and other debris around foundations<sup>95</sup>
- A commenter referenced the “Fisheries Mitigation Guidelines” as a resource to consider for the impacts of wind energy development on the commercial fishing industry. They asserted that AMMM

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<sup>90</sup> Atlantic Shores Offshore Wind, LLC.

<sup>91</sup> National Marine Fisheries Services.

<sup>92</sup> The Nature Conservancy.

<sup>93</sup> New Jersey Offshore Wind Coalition.

<sup>94</sup> National Marine Fisheries Services.

<sup>95</sup> National Marine Fisheries Services.

measures should implement standards that integrate closely with these guidelines, such as incorporating design elements that maximize fishery access, reducing space-use conflicts through infrastructure planning, coordination of cable routes and turbine layouts, and other consistent and standardized measures.<sup>96</sup>

- One commenter expressed concern about project development–based cumulative impacts on different species, such as light, noise, and EMF disruptions and recommended that BOEM and other agencies develop monitoring plans in addition to AMMM measures in order to better track such disruptions.<sup>97</sup>
- Another commenter urged close consideration of site design and layout in order to avoid and mitigate impacts on fishing, benthic resources, and more. They also encouraged time of year/day restrictions on construction in order to protect certain species and asked that Horizontal Directional Drilling (HDD) installation methods be reviewed.<sup>98</sup>
- Another commenter urged BOEM to consider changes to offshore wind layout and design as a way of mitigating overlaps with the fishing community. They also listed a number of key measures for fisheries mitigation for BOEM’s consideration, such as monitoring fisheries impacts for the life of projects; assessing cumulative impacts of offshore wind on whales and other protected resources through all project phases; conducting species-specific studies for fish stocks that may experience unique impacts; and analyzing impacts of impingement and entrainment, increased water temperature, and larval and juvenile fish mortality.<sup>99</sup>
- A commenter suggested that BOEM include accidental releases and spill mitigation measures and a Spill Prevention, Containment and Countermeasure Plan in the PEIS and urged BOEM to consider spills and accidental releases as long-term issue.<sup>100</sup>

A couple of commenters offered AMMM measures specific to the presence of turbines and cables, including vessel strike risks, entanglement concerns, and more:

- One commenter expressed concern about the increased risk of vessel strike from offshore wind development and asserted that reducing all vessel speeds to 10 knots or less could be an effective and even vital mitigation technique for BOEM to consider.<sup>101</sup>
- The same commenter also discussed turbine collision risks for birds and bats and listed some AMMM measures for preventing and mitigating those risks, such as installing collision detection

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<sup>96</sup> Fisheries Survival Fund.

<sup>97</sup> National Park Service.

<sup>98</sup> New York State.

<sup>99</sup> Responsible Offshore Development Alliance.

<sup>100</sup> EPA.

<sup>101</sup> National Wildlife Federation et al.

capabilities in turbines, setting turbine height limits, and committing to monitoring collisions to inform how best to avoid them in the future.

- They recommended that BOEM adopt a number of measures to monitor for and mitigate entanglement with turbines and their foundations, including constant monitoring of strain on mooring lines and cables and visual inspection of turbine platforms and cables.
- They also offered some AMMM measures for avoiding the negative impacts of offshore wind cables, including using “jet plow” technology for installation, requiring cable burial during some seasons, avoiding open loop cooling systems due to their negative impact on marine life, and working with fishery managers to better understand adverse impacts on marine life from turbine cables.<sup>102</sup>
- A commenter asserted that BOEM should “avoid routing export cables through estuaries and embayments” due to their being a home for many sensitive habitats and resources. They also listed a number of minimization and mitigation techniques as they apply to cables, including using cable export corridors that avoid important resources, identifying areas that would allow for full cable burial without scour protection, and considering many different project designs that might best minimize the negative impacts of cables.<sup>103</sup>

A couple of commenters discussed AMMM measures for protecting certain species and their habitats:

- A commenter asserted that standards for protected species monitoring should be adopted. They also stated that protocols for addressing unexploded ordnances should be implemented with a focus on avoiding or mitigating exposure to protected species and habitats.<sup>104</sup>
- The same commenter asserted that “compensatory mitigation” should be a requirement for any unavoidable impacts on protected species and their habitats, and that lessees should contribute to this strategy. They also discussed a number of measures for monitoring impacts on important species and habitats, including assessing changes to the seafloor; continuous Passive Acoustic Monitoring (PAM) of marine mammals, turtles, and fish; regular oceanographic sampling; and monitoring efforts through the Regional Wildlife Science Collaborative for Offshore Wind (RWSC).<sup>105</sup>
- One commenter asked that BOEM conduct studies specific to species that might experience unique impacts, especially those deemed protected species like whales.<sup>106</sup>

#### **O.4.4 Bats**

Two commenters provided comments on issues in the NY Bight PEIS related to bats.

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<sup>102</sup> National Wildlife Federation et al.

<sup>103</sup> National Marine Fisheries Services.

<sup>104</sup> National Marine Fisheries Services.

<sup>105</sup> National Marine Fisheries Services.

<sup>106</sup> Responsible Offshore Development Alliance.

One commenter expressed concerns about behavioral and physiological impacts on bats from offshore wind turbines and asked that the PEIS identify distribution and migration routes, and sonar and echolocation practices. The commenter also recommended that the PEIS examine the Block Island Wind Farm acoustic surveys to better understand the impact of offshore wind construction on bats.<sup>107</sup>

One commenter listed several species of bats found at areas relevant to the NY Bight PEIS, including Gateway and Fire Island National Seashore.<sup>108</sup>

#### **O.4.5 Benthic Resources**

Five commenters provided feedback on issues in the NY Bight PEIS related to benthic resources.

A few commenters generally discussed impacts on benthic resources from offshore wind construction and development, including degradation of the seabed, disruptions to the benthic ecosystem, adverse effects on sediment biogeochemistry, and general energy emission impacts, such as those from noise, vibration, and EMFs.<sup>109</sup> One commenter expressed concern about offshore wind development changing how fish species utilize soft-bottomed and nearshore benthic habitat.<sup>110</sup>

One commenter asserted that the PEIS must include a thorough analysis of the impacts of offshore wind development on benthic resources in the area, in part because information about short- and long-term impacts is currently lacking.<sup>111</sup> Another commenter discussed benthic environments around Gateway and Fire Island National Seashore and criticized the fact that the “issue of potential landfall locations for power cables” is not currently addressed in the NOI, and urged BOEM to address it in the PEIS.<sup>112</sup>

A commenter encouraged BOEM to identify benthic resources like important areas for deep water corals as well as existing benthic and shellfish resources. They asked that the PEIS evaluate impacts from excavation and sediment dispersal, as well as disturbance that might be caused by construction and other maintenance activities. They also urged the PEIS to “quantify cable and scour protection disturbance areas,” evaluate construction monitoring, and generally minimize impacts on benthic habitat. The commenter also recommended that BOEM include “nature-inclusive designs,” such as using material alternatives to concrete mattresses.<sup>113</sup>

One commenter asserted that a growing body of research points toward the benthic effects of offshore wind and asked that the PEIS thoroughly consider such impacts.<sup>114</sup>

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<sup>107</sup> New York State.

<sup>108</sup> National Park Service.

<sup>109</sup> Fisheries Survival Fund; Clean Ocean Action; National Park Service; New York State.

<sup>110</sup> National Wildlife Federation et al.

<sup>111</sup> Clean Ocean Action.

<sup>112</sup> National Park Service.

<sup>113</sup> New York State.

<sup>114</sup> Fisheries Survival Fund.



## O.4.6 Birds

Nine commenters provided feedback on issues in the NY Bight PEIS related to birds.

### O.4.6.1 Comments on Species

Some commenters generally discussed the abundance of birds in and around the NY Bight area, including but not limited to species of plovers, terns, gulls, shorebirds, waterfowl, hawks, egret, sandpiper, ducks, owls, skimmers, osprey, and more, many of which are considered endangered or threatened.<sup>115</sup> One commenter asserted that there are over 400 different species of birds in New Jersey and 503 species in New York,<sup>116</sup> while another commenter stated that around 333 avian species have been found in the Fire Island National Seashore area and around 326 species have been found in the Jamaica Bay Wildlife Refuge.<sup>117</sup>

A few commenters specifically mentioned the presence of the threatened Piping Plover in the NY Bight area, expressing concern about the effects of wind energy development on that species' survival and wellbeing.<sup>118</sup> One commenter specifically asked that the piping plover receive a review under the Endangered Species Act (ESA).<sup>119</sup> Another commenter stated the importance of the Holgate and Forsythe Wildlife Refuges to the Piping Plover and criticized studies for not showing how the proposed project would affect these refuges.<sup>120</sup>

### O.4.6.2 Impacts on Birds

A few commenters expressed general concern for negative impacts on birds, especially migratory species, from wind energy development in the NY Bight area. One commenter asserted that the geographic location and important water resources of the Raritan and Sandy Hook Bays make those areas an important "migratory staging area" for birds on the Atlantic Flyway. The same commenter added that habitats in the Fire Island National Seashore and Jamaica Bay are important resting and feeding areas for migratory birds, especially the Piping Plover.<sup>121</sup> A couple of commenters asked that cumulative impacts on bird wildlife and their habitats from wind energy development be reviewed and investigated in the PEIS.<sup>122</sup>

A few commenters expressed concern about mortality risks to birds from collision with turbine blades, disorientation and displacement risk from the lighting of turbines and wind energy stations, and noise disruption from turbines and their blades/general operation.<sup>123</sup> One commenter asserted that the PEIS

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<sup>115</sup> National Park Service; Clean Ocean Action; New York State; Save Long Beach Island, Inc.; National Wildlife Federation et al.

<sup>116</sup> Clean Ocean Action.

<sup>117</sup> National Park Service.

<sup>118</sup> National Park Service; K. Dreher; Save Long Beach Island, Inc.

<sup>119</sup> Save Long Beach Island, Inc.

<sup>120</sup> K. Dreher.

<sup>121</sup> National Park Service.

<sup>122</sup> Borough of Seaside Park; National Wildlife Federation et al.

<sup>123</sup> Clean Ocean Action; New York State; Save Long Beach Island, Inc.

must identify and review these numerous impacts on birds, as well as identify ways to mitigate and minimize those impacts to the greatest extent possible.<sup>124</sup> Another commenter asked that BOEM consider information from the Block Island Wind Farm post-construction surveys in order to better assess impacts on bird species from wind energy development.<sup>125</sup> One commenter asked about results from studies regarding the environmental impact on birds from proposed development.<sup>126</sup>

One commenter expressed concern about a number of other wind energy development risks to birds, including upticks in prey resources around the turbines, which could lead to more collisions, potential oil and lubricant spills in the ocean, and destruction of habitat in order to make way for onshore substations and port facilities.<sup>127</sup>

One commenter criticized BOEM's use of a 98 percent turbine avoidance rate, asserting that referenced studies supporting that number are not representative of the scale of the Proposed Action in the NY Bight area and that uses of the 98 percent avoidance rate are not supported well enough. They also urged BOEM to do a current assessment of collision and fatality risks and asserted that such a cumulative risk analysis would require the inclusion of the New Jersey wind area in the PEIS.<sup>128</sup>

One commenter asked that BOEM identify "seasonal distribution, aggregation, abundance and migration routes" for birds in the area, specifying sea duck abundance as an important consideration.<sup>129</sup> Another commenter asked that BOEM generally protect avian species in its development of offshore wind.<sup>130</sup>

#### **O.4.7 Climate Change**

Approximately 10 commenters provided feedback on climate change as it relates to the NY Bight PEIS.

Some commenters generally addressed the global threat of climate change and how offshore wind development might fit into the process of combating climate change. Specifically, a couple of commenters asserted that the swift development of offshore wind projects is needed to address the climate crisis/emergency.<sup>131</sup> One commenter asserted that offshore wind development is "a critical strategy...at the State and federal levels" to counteract reliance on fossil fuel generation,<sup>132</sup> while another called it "one significant part of the antidote" for fighting climate change.<sup>133</sup> Another

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<sup>124</sup> Clean Ocean Action.

<sup>125</sup> New York State.

<sup>126</sup> Twin Lights Historical Society.

<sup>127</sup> Clean Ocean Action.

<sup>128</sup> Save Long Beach Island, Inc.

<sup>129</sup> New York State.

<sup>130</sup> New York Offshore Wind Alliance.

<sup>131</sup> Atlantic Shores Offshore Wind, LLC; Attentive Energy LLC.

<sup>132</sup> New York Offshore Wind Alliance.

<sup>133</sup> Citizens Campaign for the Environment.

commenter asserted that wind energy installations would need to be quadrupled by 2030 in order to avoid climate change's worst effects.<sup>134</sup>

One commenter addressed climate change impacts specific to New York, including sea level rise and flooding, damages from major storms like Superstorm Sandy, warmer winters and hotter summers, air and ocean pollution from fossil fuels, and the destruction of certain ecosystems and species, like the 90 percent decline of the lobster species from warmer waters.<sup>135</sup>

A few commenters approached the idea of using offshore wind development to combat climate change with more caution. One commenter professed general support for offshore wind development to combat climate change but cautioned against developing these projects without a greater understanding of their impact on Atlantic coast resources and waters elsewhere.<sup>136</sup> One commenter asserted that, due to expanded use of fossil fuels overseas, the Proposed Action is unlikely to have a large impact on climate change, and that this use of fossil fuels should be considered as “part of Foreseeable Impacts” for each of the environmental issues and scenarios analyzed in the Draft PEIS for the Proposed Action and No Action Alternative. The same commenter also asserted that offshore wind may not be the best way to combat climate change and criticized BOEM's “silo” approach of limiting offshore wind as the only future clean energy projects, stating instead that BOEM should consider more clean onshore development projects and include the evaluation of those projects in the PEIS.<sup>137</sup>

One of the commenters that supported more offshore wind projects cautioned that they have a reciprocal relationship to climate change, meaning that they help to mitigate it but are nonetheless affected by it as well. They criticized BOEM's lack of climate change–related information in its evaluation process and urged BOEM to undergo a systematic process for “a holistic understanding science-based understanding of climate change and how offshore wind energy exists within it.”<sup>138</sup> Another commenter that professed their support for offshore wind urged BOEM to weigh the environmental benefits to combat climate change with any negative impacts of offshore wind construction.<sup>139</sup>

A couple of commenters asserted that assessments of the climate change benefits from offshore wind should be a key part of the PEIS.<sup>140</sup>

One commenter asked that BOEM assess the Proposed Action's alignment with climate change policies like the Climate Act, consider environmental impacts and habitat changes from the Proposed Action in concert with current and future climate change impacts, and ultimately “evaluate the Net Carbon

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<sup>134</sup> R. Griffin.

<sup>135</sup> Citizens Campaign for the Environment.

<sup>136</sup> American Saltwater Guides Association.

<sup>137</sup> J. Binder.

<sup>138</sup> R. Griffin.

<sup>139</sup> Citizens Campaign for the Environment.

<sup>140</sup> OW Ocean Winds East, LLC; American Clean Power Association.

Footprint” of its Proposed Action. They also urged BOEM to evaluate climate mitigation measures that would help reduce possible climate impacts.<sup>141</sup>

One commenter recommended that the PEIS identify and quantify greenhouse gas emissions associated with the Proposed Action, incorporate an energy substitution analysis, include a discussion on how reductions in greenhouse gas emissions would meet climate goals/commitments, and include as part of the NEPA analysis a discussion of foreseeable effects of future climate change on the Proposed Action and its surrounding area. They also requested that BOEM ensure that offshore wind development does not intrude on the achievement of Comprehensive Conservation and Management Plan goals, especially when considering the impacts of climate change.<sup>142</sup>

#### **O.4.8 Coastal Habitat and Fauna**

Two commenters provided feedback on coastal habitat and fauna issues related to the NY Bight PEIS.

One commenter asserted that the PEIS should analyze impacts on a number of listed protected species from offshore wind development affecting coastal habitats and fauna, adding that the cumulative impacts are likely to be significant and that any efforts to minimize and mitigate them should be taken. They also stated that the PEIS should discuss impacts on coastal habitat and fauna from the installation, presence, and eventual decommissioning of transmission cables, something that the Draft EIS did not do.<sup>143</sup>

Another commenter asked that the PEIS “identify Best Management Practices” to reduce impacts on vulnerable habitats, especially ones that may shift from the introduction of new structures and cable installation, evaluate the impacts on terrestrial vegetation, and consider “measures to prevent the spread of invasive species.” They also asked that the PEIS evaluate impacts on vegetated dune/beach habitats, Coastal Erosion Hazard Areas (CEHA), and New York State (NYS) Significant Coastal Fish and Wildlife Habitats (SCFWF), providing a link to a list of the latter.<sup>144</sup>

#### **O.4.9 Commercial and For-Hire Recreational Fishing**

Approximately 15 commenters provided feedback on commercial and for-hire recreational fishing issues related to the NY Bight PEIS.

##### **O.4.9.1 General Impacts**

A few commenters addressed the extent to which commercial and recreational fishermen and fisheries operate in and around the NY Bight proposed lease areas and would be affected by the proposed rule. One commenter asserted that the PEIS should account for not only lease areas within NY Bight but also areas leased in the Southern New England area and all the way down to North Carolina, given that

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<sup>141</sup> New York State.

<sup>142</sup> EPA.

<sup>143</sup> Clean Ocean Action.

<sup>144</sup> New York State.

commercial fishermen operate all throughout those areas.<sup>145</sup> Another commenter expressed concern about the effect of the construction, operation, and decommissioning of WEAs on Rhode Island commercial and charter fisheries.<sup>146</sup> Similarly, a commenter expressed concern about cumulative impacts on the Massachusetts fishing industry as more offshore wind projects are built on the coast.<sup>147</sup> One commenter asserted that the NY Bight is “one of the most important regions for both commercial and recreational fisheries on the East Coast” and referenced past comments they left on BOEM Calls for Interest and Proposed Sale Notices, asking BOEM to include any and all included fisheries information in the PEIS.<sup>148</sup> One commenter asserted that offshore wind development must “[safeguard] the abundance and diversity of the area’s rich fisheries.”<sup>149</sup>

One commenter referenced a number of figures showing overlap between the NY Bight leases and important fishing grounds and asked that BOEM consider their “Fisheries Mitigation Guidelines” in the PEIS in order to better develop impact minimization and mitigation standards.<sup>150</sup>

Some commenters echoed this concern about the impact of offshore wind development on the commercial and recreational fishing industries and generally urged BOEM to include an analysis and evaluation of cumulative impacts on fisheries and the fishing industry in its PEIS.<sup>151</sup> Specifically, one commenter recommended that the PEIS characterize the extent of Massachusetts fishing within the NY Bight area and evaluate potential impacts on key fishing species and thus the industry as a whole.<sup>152</sup> Another commenter asked that BOEM develop criteria for identifying “high-value fishing grounds” in order to better evaluate commercial fishing losses from offshore wind build-out.<sup>153</sup>

One commenter criticized BOEM for “deficient” previous actions on fisheries impacts and asserted that a cumulative analysis of impacts should be done on a fishery-by-fishery basis all down the coast, not simply in the NY Bight area.<sup>154</sup>

#### O.4.9.2 Specific Impacts

A few commenters stressed the importance of assessing cumulative economic impacts on the commercial fishing industry from offshore wind development, given the family-owned, community-dependent basis of many of those industries.<sup>155</sup> The latter commenter also stated the importance of including impacts on the recreational fishing industry, given the interconnected nature of the fishing

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<sup>145</sup> Long Island Commercial Fishing Association.

<sup>146</sup> Rhode Island Coastal Resources Management Council.

<sup>147</sup> Massachusetts Office of Coastal Zone Management.

<sup>148</sup> National Marine Fisheries Services.

<sup>149</sup> New York Offshore Wind Alliance.

<sup>150</sup> Fisheries Survival Fund.

<sup>151</sup> Massachusetts Office of Coastal Zone Management; Responsible Offshore Development Alliance; Long Island Commercial Fishing Association; Borough of Seaside Park; Clean Ocean Action; Rhode Island Coastal Resources Management Council; K. Dreher.

<sup>152</sup> Massachusetts Office of Coastal Zone Management.

<sup>153</sup> Responsible Offshore Development Alliance.

<sup>154</sup> Seafreeze Shoreside, Seafreeze Ltd.

<sup>155</sup> Long Island Commercial Fishing Association; Clean Ocean Action; New York State.

economy off the Atlantic coast. They went on to discuss methods of analyzing economic impacts on the fishing industry, asserting that Vessel Monitoring Systems (VMS) and National Marine Fisheries Service (NMFS) data on fishing boat tracking and fish returns could best approximate catch rates and could then be used to track economic impacts of offshore wind development on the fishing industry.<sup>156</sup>

Similarly, one commenter stated that “spatially explicit catch and effort information” is severely lacking for the recreational fishing sector and thus is a data gap the PEIS needs to consider. They referenced survey and data mining work done by the New England Aquarium’s Anderson-Cabot Center for Ocean Life as a possible blueprint for gathering future data for the PEIS.<sup>157</sup>

One commenter asked that BOEM “separate the analysis of commercial and recreational fisheries.”<sup>158</sup>

One commenter expressed concern about commercial fishing losses as a result of changes in primary productivity from offshore wind development and added that the PEIS should incorporate these impacts into environmental and socioeconomic analysis, as well as the overall cumulative impacts analysis.<sup>159</sup>

One commenter discussed a number of impacts on commercial and recreational fishing, including displacement from typical fishing areas due to offshore wind development, potential gear loss, increased navigation time to avoid offshore wind infrastructure, and general safety concerns, asking BOEM to evaluate all of these potential impacts in the PEIS.<sup>160</sup>

#### O.4.9.3 AMMM Measures/Compensation

A few commenters generally asked that the PEIS identify AMMM measures for impacts to the commercial and recreational fishing industries.<sup>161</sup>

Another commenter cautioned about conflicts with fishing gear as a result of offshore wind development and stated that cable burial depth should be evaluated as a potential mitigation technique.<sup>162</sup>

One commenter listed a number of mitigation and compensation measures for BOEM’s consideration, including measures to offset costs of supporting infrastructure, a standardized process for gear loss claims, and a “full, transparent, equitable, and science-based compensation program.” They also recommended the establishment of a federal fisheries working group to manage and produce mitigation

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<sup>156</sup> Clean Ocean Action.

<sup>157</sup> American Saltwater Guides Association.

<sup>158</sup> T. Barten.

<sup>159</sup> Seafreeze Shoreside, Seafreeze Ltd.

<sup>160</sup> New York State.

<sup>161</sup> Responsible Offshore Development Alliance; Fisheries Survival Fund; Massachusetts Office of Coastal Zone Management.

<sup>162</sup> New York State.

frameworks.<sup>163</sup> Another commenter added that part of the cumulative analysis should include financial mitigation to fishermen who were not included in the federal review process.<sup>164</sup>

Refer to Section O.4.3, *Avoidance, Minimization, Mitigation, and Monitoring (AMMM) Measures (including stipulations)*, for more details on specific AMMM measures.

#### O.4.9.4 Collaboration

A commenter professed support for a PEIS, asserting that it would help streamline consistency between different offshore wind projects and could allow cumulative impacts to be evaluated early in the process.<sup>165</sup>

One commenter asked that the PEIS outline a fisheries research plan to improve coordination between developers and stakeholders.<sup>166</sup> Another commenter asked that BOEM require developers to “co-develop cooperative monitoring and research plans” with the fishing industry and themselves partner with the fishing industry to provide a centralized “information depository” accessible to fishermen.<sup>167</sup> One commenter encouraged BOEM to continue conversations with the fishing industry about gear adaptations so that they can continue fishing throughout certain times of the year.<sup>168</sup>

#### O.4.10 Cultural Resources

Four commenters provided feedback on cultural resources issues related to the NY Bight PEIS.

A commenter warned that the anchoring, cabling, and use of chains involved in offshore wind energy development could substantially impact cultural resources in the NY Bight such as submerged shipwrecks. This commenter further recommended that BOEM’s PEIS analyze these resources, the potential impacts of offshore wind development on them, and potential mitigation measures, adding that Indian Tribes should be involved in the identification of cultural resources.<sup>169</sup> Similarly, another commenter suggested that offshore wind development be planned with sensitivity to historic and cultural heritage of northeastern Tribal Nations.<sup>170</sup>

A commenter suggested an alternative to BOEM’s current guidelines for geophysical surveys with respect to potential impacts on marine archeological resources, arguing that allowing lessees to first conduct surveys at wider intervals to identify larger shipwrecks and submerged landscape features, with closer interval surveys to be conducted later within the final project footprint to identify smaller, buried

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<sup>163</sup> Responsible Offshore Development Alliance.

<sup>164</sup> Long Island Commercial Fishing Association.

<sup>165</sup> New England and Mid-Atlantic Fishery Management Councils.

<sup>166</sup> Massachusetts Office of Coastal Zone Management.

<sup>167</sup> Responsible Offshore Development Alliance.

<sup>168</sup> New York State.

<sup>169</sup> Clean Ocean Action.

<sup>170</sup> New York Offshore Wind Alliance.

marine cultural resources. The commenter further recommended that BOEM analyze approaches to avoid, minimize, and mitigate impacts on these resources.<sup>171</sup>

A commenter said that there are ongoing conservation initiatives in the NY Bight, including the designation process for the Hudson Canyon National Marine Sanctuary to protect cultural resources.<sup>172</sup>

#### **O.4.11 Cumulative Impacts**

Approximately 15 commenters provided feedback on cumulative impacts relevant to the NY Bight PEIS.

##### **O.4.11.1 General Comments on Cumulative Impacts**

A commenter warned that the cumulative impacts of offshore wind energy development in the NY Bight would be substantial.<sup>173</sup> Another commenter said that BOEM's PEIS should include a fair and full consideration of potential cumulative impacts of offshore wind development in the NY Bight.<sup>174</sup>

A commenter said that BOEM should ensure that efforts are made to avoid, minimize, and mitigate potential cumulative impacts.<sup>175</sup> Similarly, another commenter recommended that where potential cumulative impacts are identified, BOEM should clarify which parties should be responsible for avoiding, minimizing, and mitigating those impacts.<sup>176</sup>

A commenter argued that by assessing cumulative impacts and mitigation measures, BOEM may be able to identify preferable alternative actions.<sup>177</sup>

##### **O.4.11.2 Cumulative Impacts on Fisheries and Fishing**

A commenter expressed support for BOEM's plan to include a PEIS in its rulemaking process, which the commenter claimed appears to be in response to the fishing industry's requests to better assess the cumulative effects of offshore wind development on fisheries.<sup>178</sup> Similarly, another commenter expressed support for BOEM's proposed programmatic approach, claiming that the need for cumulative impacts analyses has been posited by fishery stakeholders and scientists, and that such an approach facilitates stakeholders, such as for-hire captains and private anglers, sharing their input.<sup>179</sup>

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<sup>171</sup> Attentive Energy LLC.

<sup>172</sup> National Wildlife Federation et al.

<sup>173</sup> Wallace & Associates.

<sup>174</sup> Clean Ocean Action.

<sup>175</sup> Clean Ocean Action.

<sup>176</sup> Environmental Protection Agency.

<sup>177</sup> National Wildlife Federation et al.

<sup>178</sup> Responsible Offshore Development Alliance.

<sup>179</sup> American Saltwater Guides Association.



A commenter recommended that BOEM’s PEIS articulate how cumulative impacts are considered and incorporated on a project-by-project basis and on an industry-wide scale, identify funding mechanisms and interagency collaborations, and describe mechanisms for mitigating potential fishery collapse.<sup>180</sup>

A couple of commenters recommended that BOEM’s PEIS include an analysis of cumulative impacts on fishing operations, such as changes to time and area fished, displaced fishing effort, gear used, stresses on fisheries, and landing ports.<sup>181</sup>

A commenter recommended that BOEM’s cumulative analysis assess economic impacts on fishermen from New York who suffered because the State did not file for federal consistency review, as well as include a revamping of NOAA’s regional geographic location definition process so that all qualified regional coastal states could automatically qualify if they can prove income from relevant landings. This commenter additionally recommended that the cumulative analysis consider financial mitigation schemes that could be designed for fishermen who were not included during the federal consistency review process.<sup>182</sup>

Multiple commenters recommended that BOEM’s cumulative analysis, with respect to impacts on fisheries, be conducted coastwide and fishery-by-fishery and take into account the impacts of existing and foreseeable future offshore wind leases, rather than only on a project-by-project basis.<sup>183</sup> Another commenter echoed this argument and further suggested that in its analysis, BOEM include a description of the potentially impacted resources, current trends regarding the resources, and a discussion of likely future conditions of the resources based on current conditions, trends, and foreseeable projects.<sup>184</sup>

#### O.4.11.3 Cumulative Impacts on Wildlife

A commenter said that assessing cumulative impacts, through BOEM’s PEIS, is essential to understanding the overall impacts of offshore wind development on species and ecosystems, including the effects of noise and the timing of construction.<sup>185</sup>

Multiple commenters recommended that BOEM’s PEIS include an analysis of cumulative impacts on endangered species, particularly the effects of noise.<sup>186</sup> Another commenter specified their concern for cumulative impacts on the North Atlantic right whale and key benthic species, claiming that there is insufficient scientific understanding of offshore wind energy development’s effects on these species.<sup>187</sup>

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<sup>180</sup> Massachusetts Office of Coastal Zone Management.

<sup>181</sup> Rhode Island Coastal Resources Management Council; New York State.

<sup>182</sup> Long Island Commercial Fishing Association.

<sup>183</sup> Seafreeze Shoreside, Seafreeze Ltd.; New England and Mid-Atlantic Fishery Management Councils; American Saltwater Guides Association; Rhode Island Coastal Resources Management Council; New York State.

<sup>184</sup> Environmental Protection Agency.

<sup>185</sup> National Wildlife Federation et al.

<sup>186</sup> Environmental Protection Agency; Rhode Island Coastal Resources Management Council.

<sup>187</sup> Clean Ocean Action.

A commenter recommended that BOEM’s cumulative impacts analysis consider effects on habitats, avian and marine mammal migratory pathways, and other ecological processes.<sup>188</sup>

#### O.4.11.4 Geophysical and Hydrodynamic Cumulative Impacts

A commenter expressed support for BOEM conducting cumulative impact analyses for the rule, particularly with regard to major oceanographic features such as the Mid-Atlantic Bight Cold Pool, which the commenter claimed is especially important for the regional benthic ecosystem and may be particularly susceptible to changes in hydrodynamics caused by wind farm structures.<sup>189</sup>

A commenter also suggested that the PEIS include an analysis of the potential cumulative impacts on sediment biogeochemistry from the increased volume of fecal pellets from fouling fauna and biomass falling from turbine reef structures, which lead to increases in mineralization activity, sedimentary oxygen consumption, and consequently carbon dioxide levels.<sup>190</sup>

Another commenter recommended that BOEM require permits for geological and geophysical surveys and conduct cumulative analyses for such permits.<sup>191</sup>

#### O.4.11.5 Other Comments on Cumulative Impacts

A commenter recommended that BOEM’s PEIS include an analysis of offshore wind development’s potential cumulative impacts on marine commerce.<sup>192</sup>

A commenter recommended that BOEM’s PEIS include an analysis of the potential cumulative impacts of noise on residential and commercial buildings near port facilities.<sup>193</sup>

A couple of commenters recommended that BOEM consider increased vessel traffic and consequent navigational hazards in its cumulative impacts analysis.<sup>194</sup>

A commenter warned that offshore wind development would have cumulative adverse visual impacts on historic properties, sites, and districts listed or eligible for listing in the National Register of Historic Places, adding that because of the historic integrity of properties within the project area, and the precedent set by this rulemaking for future offshore wind development, it is important that the PEIS is complete and thorough.<sup>195</sup>

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<sup>188</sup> New York State.

<sup>189</sup> Fisheries Survival Fund.

<sup>190</sup> Clean Ocean Action.

<sup>191</sup> Responsible Offshore Development Alliance.

<sup>192</sup> Environmental Protection Agency.

<sup>193</sup> Environmental Protection Agency.

<sup>194</sup> Rhode Island Coastal Resources Management Council; New York State.

<sup>195</sup> Cape May County, NJ; Point O’Woods Association, Fire Island, NY.

A commenter recommended that BOEM’s PEIS identify the temporal and spatial criteria necessary for its regional cumulative analysis.<sup>196</sup>

A commenter argued that BOEM’s interpretation and tiering of the NEPA review process, as well as the bifurcation of nearby projects like Ocean Wind, Atlantic Shores, and Empire Wind, has obscured the cumulative impacts of offshore wind development. The commenter further requested clarification of the notice’s claim that the PEIS will allow BOEM to address “tiering of project-specific environmental analyses.”<sup>197</sup>

A commenter recommended that BOEM’s cumulative impacts analysis consider effects on sand mining and planned resilience projects.<sup>198</sup>

Refer to the relevant resource sections throughout this appendix for more expansive summaries of the above topics not relating to cumulative impacts.

#### **O.4.12 Demographics, Employment, and Economics**

Approximately 10 commenters provided feedback on demographics, employment, and economics issues related to the NY Bight PEIS.

##### **O.4.12.1 Positive Impacts on Demographics, Employment, and Economics**

A commenter claimed that this initiative would help meet the Administration’s, New Jersey’s, and New York’s clean energy goals while creating economic opportunity and tens of thousands of jobs.<sup>199</sup> Similarly, another commenter estimated that the development and construction of 16.5 GW of offshore wind energy off the coasts of New York and New Jersey could directly or indirectly support approximately 50,000 jobs, and that nationally reaching 30 GW by 2030 would create 83,000 jobs. This commenter further argued that BOEM has underestimated the economic benefits of offshore wind development in its past NEPA analyses by focusing on the effects on the local area and not including regional and national supply chain and economic effects, adding that project approvals in a young industry can have ripple growth effects across that industry’s supply chain. Finally, the commenter said that to deny the project would have the opposite effect, disrupting supply chain investments in the wind energy industry.<sup>200</sup>

A commenter cited a study to claim that requiring developers to use 100 percent domestic content inputs versus 25 percent domestic content could result in a difference of 30,000–40,000 jobs created from 2023–2030.<sup>201</sup>

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<sup>196</sup> Clean Ocean Action.

<sup>197</sup> Clean Ocean Action.

<sup>198</sup> New York State.

<sup>199</sup> OW Ocean Winds East, LLC.

<sup>200</sup> American Clean Power Association.

<sup>201</sup> Bluegreen Alliance.

A commenter said that this initiative would help reduce greenhouse gas emissions and create a robust domestic offshore wind manufacturing sector.<sup>202</sup>

#### O.4.12.2 Negative Impacts on Demographics, Employment, and Economics

A commenter argued that given the size and visibility of the proposed project, it could cause losses of tourism revenue of up to \$300 million per year, nearby property value losses ranging from \$1 million to \$189,000 per home, an approximately 55 percent reduction in area vacation rentals, and job losses in the hospitality sector.<sup>203</sup>

A commenter claimed that based on figures published by the New Jersey Board of Public Utilities, the planned developments would cause electric rates to increase in the State, with residential rates increasing 10 percent, commercial rates 15 percent, and industrial sector rates 18 percent, which could cause job losses. This commenter further claimed that many of the jobs the projects would create are temporary and that it is unclear how many would be held by U.S. workers.<sup>204</sup> Similarly, another commenter claimed that wind turbines are largely manufactured outside of the United States, which does not benefit U.S. employment.<sup>205</sup>

#### O.4.12.3 Recommendations with Respect to Demographics, Employment, and Economics

A commenter recommended that BOEM require developers to report investments in workforce training and supply chain development.<sup>206</sup>

A commenter suggested that BOEM consider changes that have occurred since it issued its Programmatic EIS for Alternative Energy Development in 2007 with respect to the economics of offshore wind, including: the automation of the operation and maintenance of offshore wind energy systems, which reduces potential for job creation; the relative costs of offshore wind energy and other clean energy technologies; and the reliability of wind energy in general.<sup>207</sup>

A commenter recommended that BOEM's PEIS include a socioeconomic impact analysis that considers electric rates and lost tourism and the offsetting benefits in terms of reduced emissions.<sup>208</sup>

A couple of commenters recommended that BOEM consider impacts on regional fisheries, potential lost jobs and income among commercial fishermen and recreational for-hire fishing, and higher costs to the seafood industry in general.<sup>209</sup>

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<sup>202</sup> New York Offshore Wind Alliance.

<sup>203</sup> K. Dreher.

<sup>204</sup> Save Long Beach Island, Inc.

<sup>205</sup> J. Binder.

<sup>206</sup> Aspen Institute.

<sup>207</sup> J. Binder.

<sup>208</sup> Save Long Beach Island, Inc.

<sup>209</sup> Responsible Offshore Development Alliance; Clean Ocean Action.

A commenter made numerous recommendations with respect to the rule's potential economic effects, including that BOEM:

- Require compensatory mitigation for fishermen for the life of the project and establish adequate reserve funds for that purpose by establishing a compensation program paid into by lessees.
- Honor compensation claims for up to 3 years after income loss, per review by fisheries experts.
- Conduct transparent impact analyses with respect to energy, economics, employment, and greenhouse gas emissions for regions and specific projects.<sup>210</sup>

Another commenter also made numerous recommendations with respect to the rule's potential economic effects, including that BOEM:

- Assess potentially higher costs for offshore wind energy.
- Present comprehensive mitigation and compensatory measures for unavoidable impacts.
- Clearly communicate the costs of development including siting, preconstruction, construction, operations, maintenance, and decommissioning.
- Provide information about cost protections to electricity ratepayers for potentially higher energy costs.<sup>211</sup>

Another commenter also made numerous recommendations with respect to the rule's potential economic effects, including that BOEM:

- Identify potential impacts on shore-based and water-dependent industries and potentially restricted port access due to increased vessel traffic and construction.
- Assess impacts on public services, populations, economy, employment, housing and property values, the reliability of electric facilities, and public safety.
- Evaluate conformity with United States Coast Guard (USCG) Marine Planning Guidelines.<sup>212</sup>

In order to maximize union job creation and comply with NEPA, a commenter recommended that BOEM's PEIS consider and evaluate: domestic content commitments; project labor, labor peace, and community benefits agreements; utilization of registered apprentices; protections against worker misclassification and wage theft; impacts on fisheries, in consultation with industry stakeholders; equitable access to benefits for historically underserved communities; quantity and quality of jobs created; plans to support the growth of a domestic supply chain to maximize U.S. employment; and programs necessary for expanding the domestic workforce with an emphasis on ensuring opportunities

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<sup>210</sup> Responsible Offshore Development Alliance.

<sup>211</sup> Clean Ocean Action.

<sup>212</sup> New York State.

for displaced energy workers. This commenter further argued that using PLAs can help avoid labor disputes, increase project efficiency, improve safety, and create opportunities for historically marginalized communities.<sup>213</sup>

Refer to Section O.4.9 for additional comments on commercial and for-hire recreational fishing, Section O.4.19 for additional comments on navigation and vessel traffic, and Section O.4.23 for additional comments on recreation and tourism not relating to demographics, employment, and economics.

### **O.4.13 Environmental Justice**

Nine commenters provided feedback on environmental justice issues related to the NY Bight PEIS.

#### **O.4.13.1 Environmental Justice Benefits**

A commenter stated that offshore wind development could create environmental justice benefits.<sup>214</sup> Another commenter concurred and specified that these benefits could include reducing the environmental and public health burden of fossil fuel generation on frontline communities.<sup>215</sup>

#### **O.4.13.2 Environmental Justice Concerns**

A commenter claimed that the impacts of offshore wind development they foresee, including noise, light pollution, air emissions from vessels, reduced access to coastal areas, loss of wetlands, loss of employment in marine industries, and increased stormwater runoff from new parking lots and roads, would be amplified for environmental justice communities.<sup>216</sup>

A commenter warned that people who live and invest in nearby ocean communities would be negatively impacted by this rule, with the quality of the ocean degrading, European developers earning money at their expense, and local livelihoods declining.<sup>217</sup>

#### **O.4.13.3 Process Recommendations for Achieving Environmental Justice**

Several commenters recommended that BOEM consider issues of environmental justice in this rulemaking process.<sup>218</sup> More specifically, a commenter recommended that BOEM incorporate environmental justice concerns raised in New York's Climate Act, consider impacts on disadvantaged communities (DACs) and potential mitigation measures for those impacts, and analyze increased air emissions and other impacts in Potential Environmental Justice Areas.<sup>219</sup> Another commenter recommended that BOEM use EPA's Environmental Justice Screening and Mapping Tool to consider

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<sup>213</sup> Bluegreen Alliance.

<sup>214</sup> American Clean Power Association.

<sup>215</sup> New York Offshore Wind Alliance.

<sup>216</sup> Clean Ocean Action.

<sup>217</sup> Wallace & Associates.

<sup>218</sup> Mayor John A Peterson, Jr.; OW Ocean Winds East, LLC.

<sup>219</sup> New York State.

possible impacts on vulnerable adjacent communities; and noise, air, lighting, and traffic impacts from construction and project operations on populations surrounding facilities.<sup>220</sup>

A commenter claimed that they identified DAC representatives from New York and New Jersey who desired earlier engagement in the present rulemaking process, in addition to increased transparency and accountability. By engaging these stakeholders later in the process, this commenter reasoned, their ability to provide valuable feedback is limited because they have had limited exposure to the process. This commenter further recommended that BOEM hold at least one roundtable with DAC stakeholders during the preparation of the PEIS; use these meetings as opportunities to educate DACs on the leasing process, explain the role of the PEIS in the process, identify key concerns and recommendations from DACs, and help build the capacity of DACs to engage overall; share these meetings' agendas, attendance rosters, and summaries of recommendations; and require developers to track and report percentage of the benefits of investments in workforce training and supply chain development going to DACs, which would facilitate understanding how offshore wind development affects DACs and encourage developers to more intentionally consider how DACs are affected by development. Finally, this commenter suggested that BOEM can find sample guidance for such investment monitoring benchmarks from New York State Energy Research & Development Authority's (NYSERDA) 2022 Offshore Wind Solicitation, under which bidders must present their own monitoring framework and ensure that it is verified by a third party.<sup>221</sup>

A commenter requested that if BOEM believes that the closure or displacement of fossil fuel facilities is beneficial for nearby communities and that this will occur if offshore wind energy is developed in the area, that the PEIS present evidence supporting these positions.<sup>222</sup>

#### **O.4.14 ESA-Listed Species**

Five commenters provided feedback on the NY Bight PEIS related to ESA-listed species.

##### **O.4.14.1 Potential Impacts on Endangered Species and Mitigation Measures**

A commenter stated that the NY Bight is used by a number of species listed under the ESA, including fish, sea turtles, and marine mammals.<sup>223</sup> This commenter further recommended that BOEM monitor protected species during wind farm construction and analyze and develop approaches to construction that will minimize impacts on protected species, particularly with regard to reducing noise from pile-driving, dealing with unexploded ordinances, managing vessel traffic at night and in low visibility conditions, avoiding construction during sensitive times of the year, requiring practices to minimize entanglement, mandating routine cleanups, and choosing cable installation methods that minimize impacts. The commenter also recommended that BOEM require adherence to best management practices to limit capture, entanglement, injury, and mortality of protected species in biological surveys

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<sup>220</sup> Environmental Protection Agency.

<sup>221</sup> Aspen Institute.

<sup>222</sup> Clean Ocean Action.

<sup>223</sup> National Marine Fisheries Services.

and that protected species do not interact with gear such as anchor and buoy lines. Additionally, the commenter recommended that dredging activities be subject to seasonal restrictions based on dredge types and possible risks to listed species.<sup>224</sup>

A commenter warned that increased vessel activity and noise from offshore wind development in the NY Bight would be an existential threat to the endangered North Atlantic right whale, of which the commenter claimed only 336 remain. This commenter further recommended that no construction or other offshore wind activity be allowed in the NY Bight during the whale's most sensitive times of the year, including migration periods.<sup>225</sup> Another commenter similarly expressed concern for the project's potential impacts on North Atlantic right whales, adding that they are a particularly valuable and beautiful species.<sup>226</sup> Refer to Section O.4.18 for additional comments on marine mammals.

A commenter recommended that BOEM evaluate year-round northern long-eared bat activity in the vicinity of the proposed action and potential impacts on the species, including tree clearing during construction.<sup>227</sup>

#### O.4.14.2 Other Process Recommendations with Respect to Endangered Species

A commenter recommended that BOEM identify surveys for rare, threatened, and endangered species along all considered project routes; assess potential impacts on those species along those routes; and consider avoidance, minimization, and mitigation measures with respect to those potential impacts.<sup>228</sup>

A commenter recommended that BOEM consult with the United States Fish and Wildlife Service (USFWS) on potential impacts on aquatic and terrestrial species, in accordance with Section 7 of the ESA.<sup>229</sup>

#### O.4.15 Finfish, Invertebrates, and Essential Fish Habitat

Eight commenters provided feedback on finfish, invertebrates, and essential fish habitat issues related to the NY Bight PEIS.

A commenter requested that BOEM include a consideration of fish habitats as part of its rulemaking process and warned that effects on them from offshore wind development in the NY Bight could be significant.<sup>230</sup> Another commenter requested information about studies of offshore wind development's

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<sup>224</sup> National Marine Fisheries Services.

<sup>225</sup> Clean Ocean Action.

<sup>226</sup> Mayor John A Peterson, Jr.

<sup>227</sup> New York State.

<sup>228</sup> New York State.

<sup>229</sup> Environmental Protection Agency.

<sup>230</sup> Mayor John A Peterson, Jr.



effects on fish.<sup>231</sup> Another commenter argued that not enough data is available to fully understand the effects of offshore wind development on finfish and invertebrates.<sup>232</sup>

A commenter claimed that areas of the NY Bight are designated as essential fish habitat for nearly every life-stage of every species managed by the New England and Mid-Atlantic Fishery Management Councils and NMFS, as well as many managed by the South Atlantic Fishery Management Council.<sup>233</sup>

A commenter recommended that BOEM identify current stock status for different species of fish and invertebrates, as well as migration routes, life history stages, and egg and larval seasonality and abundance. This commenter further recommended that BOEM identify essential fish habitat, including spawning, recruitment, and nursery areas, as well as food web interactions.<sup>234</sup>

A commenter claimed that the NY Bight is home to and essential habitat for numerous species, including sea scallops, Atlantic surf clams, ocean quahogs, longfin squid, Atlantic cod, black sea bass, blue fish, and summer flounder.<sup>235</sup> Similarly, another commenter expressed particular concern for sea scallop, surf clam, and ocean quahog populations in and around the NY Bight, which the commenter claimed are particularly important for the seafood industry, and suggested that BOEM designate additional funding for research on potential mitigation measures to protect these species from any possible impacts from offshore wind development.<sup>236</sup>

Several commenters warned that many features or potential accidents arising from offshore wind development could impact finfish, invertebrates, and essential fish habitat, including mid-water structures, noise, EMFs, construction, pile-driving, vessel traffic, foundation lighting, thermal discharges, and oil or other lubricants spills, and that BOEM should analyze the potential impacts of these factors.<sup>237</sup> One of these commenters further warned that such factors could cause changes in migration routes and migratory behavior of migratory fish species, as well as potentially altering local and regional hydrodynamics, which could impact fish and invertebrate settlement, recruitment, and connectivity.<sup>238</sup>

A commenter recommended that BOEM expand NMFS's role in project monitoring and essential fish habitat consultations, as well as giving greater deference to its expertise in these areas.<sup>239</sup> Another commenter recommended that BOEM work with NOAA, State governments, and Tribal Nations to designate marine sanctuaries in the NY Bight.<sup>240</sup>

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<sup>231</sup> Twin Lights Historical Society.

<sup>232</sup> Clean Ocean Action.

<sup>233</sup> National Marine Fisheries Services.

<sup>234</sup> New York State.

<sup>235</sup> Clean Ocean Action.

<sup>236</sup> NJDEP.

<sup>237</sup> National Wildlife Federation et al.; New York State; Clean Ocean Action.

<sup>238</sup> National Wildlife Federation et al.

<sup>239</sup> Responsible Offshore Development Alliance.

<sup>240</sup> National Wildlife Federation et al.

#### O.4.16 Geological, Geophysical, and Biological Bathymetric Conditions

One commenter provided several recommendations for BOEM regarding geological, geophysical, and biological bathymetric conditions, including that BOEM should:

- Identify sediment quality, type and chemistry within lease areas and along potential cable corridors.
- Evaluate micro-gyres and circulation changes around structures to evaluate scouring and sedimentation from turbine bases and cables and effects on cable burial from coastal processes and storms.
- Evaluate air circulation changes from turbines and sea surface temperature impacts to assess seafloor disturbances from turbine structures and cables.
- Assess seafloor disturbances from construction methodologies such as anchoring, dredging, and seafloor leveling.
- Evaluate cable burial depths necessary to avoid EMF impacts, conflicts with fishing gear, and anchor strikes.
- Evaluate habitat changes from turbine and cable installation, including boulder relocation and seafloor leveling.<sup>241</sup>

#### O.4.17 Land Use and Coastal Infrastructure

Four commenters provided feedback on land use and coastal infrastructure issues related to the NY Bight PEIS.

A commenter claimed that there is insufficient scientific data on the effects of the construction of the necessary supporting infrastructure for offshore wind energy development.<sup>242</sup>

A commenter warned that this initiative could cause substantial onshore land use impacts from land disturbance, port utilization, cabling routes, and transmission infrastructure, as well as new port areas, parking lots, and structures. This commenter further recommended that BOEM's PEIS estimate the total onshore acreage required for construction, manufacturing, assembly, transportation, operations, and maintenance, as well as disclose rezoning and reclassification and requirements. This commenter added that onshore land disturbance could have effects on stormwater collection and management, and consequently the PEIS should consider this effect in flood-prone areas. Additionally, the commenter recommended that the PEIS evaluate impacts from the use of pesticides, herbicides, and other chemicals in onshore project areas, and that BOEM should require green infrastructure methods in

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<sup>241</sup> New York State.

<sup>242</sup> Mayor John A Peterson, Jr.

project development. Finally, the commenter warned that the developments could impact wetlands in the region.<sup>243</sup>

A commenter provided several recommendations for BOEM regarding land use and coastal infrastructure, including that BOEM:

- Evaluate potential temporary and permanent impacts on land use from siting new infrastructure, including docks, piers, and shoreline stabilization.
- Evaluate potential impacts on vegetated dune and beach habitats; consider impacts on CEHA.
- Avoid disturbing sand borrow areas and beach nourishment activities.
- Provide details on how environmental impacts from operational, maintenance, and port facilities will be analyzed.
- Consider the existing capacity or need for additional capacity of onshore cable for accepting additional power.<sup>244</sup>

A commenter suggested that BOEM adopt as a goal the improvement land use planning to protect soil function, water quality, water supply, and living resources.<sup>245</sup>

#### **O.4.18 Marine Mammals**

Approximately 10 commenters provided feedback on issues related to marine mammals in the NY Bight PEIS.

A couple of commenters claimed that the NY Bight is home to numerous species of marine mammals, some of which are endangered, including: sei, blue, fin, humpback, sperm, and northern right whales; harbor porpoises; bottlenose dolphins; harbor seals; and West Indian manatees.<sup>246</sup> Several commenters warned the offshore wind development could impact such marine mammals in the NY Bight and that BOEM should consider these impacts.<sup>247</sup> One of these commenters added that there has been insufficient research to date on these impacts.<sup>248</sup>

Many commenters warned of the potential effects that features and accidents arising from offshore wind energy development could have on marine mammals and requested that BOEM analyze these impacts and consider potential mitigation measures; these factors included: noise, vessel traffic and strikes, EMFs, in-water structures, sedimentation from land and seabed disturbances, trash, oil spills, pile-driving, dredging, cable laying, drilling, turbine operation, intakes and discharges related to cooling

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<sup>243</sup> Clean Ocean Action.

<sup>244</sup> New York State.

<sup>245</sup> Environmental Protection Agency.

<sup>246</sup> National Park Service; Clean Ocean Action.

<sup>247</sup> Mayor John A Peterson, Jr.; New York Offshore Wind Alliance; National Park Service; Clean Ocean Action.

<sup>248</sup> Clean Ocean Action.

offshore wind conversion stations, altered micro-climates, altered hydrodynamics, and prey entrainment.<sup>249</sup>

A commenter requested that BOEM identify seasonal distribution, abundance, and migration routes for marine mammals.<sup>250</sup> Another commenter recommended that the PEIS report the results of recent and ongoing marine mammal surveys in the NY Bight and report how developers will work together and with the research community to improve understandings of mitigation measures.<sup>251</sup>

Several commenters suggested BOEM devote particular attention to the endangered North Atlantic right whale and potential impacts to the species.<sup>252</sup> Another commenter echoed this concern, additionally claiming that fewer than 340 of the whales remain, with the NY Bight being part of their migratory corridor. This commenter argued that vessel traffic and noise exacerbate pressures on this population and that the PEIS should account for potential impacts on the species. This commenter further recommended that no construction or other offshore wind activity be allowed in the NY Bight during the whale's most sensitive times of the year, including migration periods.<sup>253</sup> Similarly, another commenter recommended that noisy construction activities only occur during the day and good weather conditions to maximize visual detection probability for the whales; this commenter further argued that even a single vessel strike on a North Atlantic right whale is an unacceptable risk given their status.<sup>254</sup>

Another commenter suggested considering no-build migratory routing measures for protected species like the North Atlantic right whale.<sup>255</sup> Similarly, another commenter expressed concern for potential impacts on the North Atlantic right whale's migration corridors from noise from turbines, including preventing migration and causing injury or death by interfering with the whales' ability to communicate. Furthermore, the commenter claimed that one possible reaction of whales to such a disturbance is to swim just beneath the surface, which increases the likelihood of vessel strikes.<sup>256</sup> Refer to Section O.4.14 for additional comments on ESA-listed species.

#### **O.4.19 Navigation and Vessel Traffic**

Approximately 10 commenters provided feedback on navigation and vessel traffic issues related to the NY Bight PEIS.

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<sup>249</sup> National Wildlife Federation et al.; Clean Ocean Action; Massachusetts Office of Coastal Zone Management; National Park Service; New York State.

<sup>250</sup> New York State.

<sup>251</sup> Massachusetts Office of Coastal Zone Management.

<sup>252</sup> J. Binder; National Wildlife Federation et al.; K. Dreher; New York Offshore Wind Alliance.

<sup>253</sup> Clean Ocean Action.

<sup>254</sup> National Wildlife Federation et al.

<sup>255</sup> Responsible Offshore Development Alliance.

<sup>256</sup> Save Long Beach Island, Inc.

#### O.4.19.1 General Comments on Navigation and Vessel Traffic

Multiple commenters warned that offshore wind energy development in the NY Bight could increase vessel traffic.<sup>257</sup> One of these commenters added that this could impact marine mammals and sea turtles.<sup>258</sup> Another commenter warned that offshore wind development in the NY Bight would pose a threat to navigational safety for all commercial vessel traffic in the area.<sup>259</sup>

#### O.4.19.2 Specific Comments on Risks Posed by Increased Vessel Traffic

A commenter warned that offshore wind development in the NY Bight could interfere with marine radar, causing navigational safety risks, and cited a study to dispute BOEM's position that solid state and Doppler-based radars are adequate solutions to these impacts.<sup>260</sup> A couple of other commenters similarly expressed concern for the potential effects on marine radar.<sup>261</sup>

A commenter warned that wind farm construction could cause traffic impacts from construction vessels transporting turbine parts, from vessels exporting cable and upland infrastructure, and from the use of ports and operations and maintenance facilities.<sup>262</sup>

Another commenter expressed additional concerns about the effects of wind energy leasing in the NY Bight on navigation and vessel traffic, including:

- The scour protection employed by the developments could cause vessels' anchors to fail to hold and that interactions between anchors and cables could damage either.
- Turbines could increase collision risks with slow-moving maintenance vessels and by creating reefs that attract fishermen.
- Increased congestion and navigational complexity would increase crew fatigue, damage to vessels, injuries to crews, fuel spills, and engagement of USCG rescue teams.
- The development would significantly impact port utilization, increasing competition for berthing space and port services in the area and potentially further complicating national supply chain issues.<sup>263</sup>

A commenter warned that large vessel collisions in or around the lease areas could cause substantial environmental damage, and the emergency response and clean-up could severely restrict shipping lanes, causing significant economic impacts.<sup>264</sup>

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<sup>257</sup> National Wildlife Federation et al.; Mayor John A Peterson, Jr.

<sup>258</sup> National Wildlife Federation et al.

<sup>259</sup> World Shipping Council.

<sup>260</sup> Seafreeze Shoreside, Seafreeze Ltd.

<sup>261</sup> Long Island Commercial Fishing Association; Clean Ocean Action.

<sup>262</sup> New York State.

<sup>263</sup> Clean Ocean Action.

<sup>264</sup> World Shipping Council.

### O.4.19.3 Recommendations with Respect to Navigation and Vessel Traffic

#### *Turbine Spacing and Lane Markings*

A commenter recommended that BOEM require that wind farms be organized in straight rows and columns, in a grid pattern, to facilitate navigation safety, consistent marking and lighting, search and rescue, and safe commercial fishing. The commenter further recommended that when multiple wind projects share a border, lessees be required to adopt the same spacing and layout across borders to present a single wind farm with consistent straight-line routes. If this is not possible, the commenter recommended that space be left between borders to provide a clear delineation, or that clear markings be applied to warn mariners of changes in spacing or orientation. Finally, the commenter said that all mooring systems and ancillary equipment should be confined to the lease areas.<sup>265</sup>

Similarly, another commenter recommended that transit corridors be established through proposed wind farms and turbine arrays, and that the PEIS consider alternative layouts and provide information on navigational risks and mitigation measures.<sup>266</sup> Another commenter similarly suggested that BOEM analyze spacing patterns between turbines and other infrastructure that could either allow fishing to continue or preserve more structure-free areas.<sup>267</sup>

#### *Buffer Zones*

Several commenters argued that around offshore wind energy development near port approaches, there should exist a minimum buffer zone of 2 nautical miles from the parallel outer or seaward boundary of a traffic lane and of 5 nautical miles from the entry or exit of traffic separation schemes.<sup>268</sup> One of these commenters argued that such a buffer zone is necessary for vessels to detect each other visually and by radar, to allow large vessels to maneuver during an emergencies, and to accommodate the “swing circles” of large anchored vessels. These commenters found that lease blocks included in the proposal fall within this such appropriate buffer zones around nearby port approaches.<sup>269</sup>

#### *Accommodating United States Coast Guard Designations*

A commenter suggested that BOEM consider referencing port access route studies to mitigate navigation safety risks from offshore wind energy installations. This commenter also suggested that BOEM consider the future uses of the “Ambrose anchorage,” an offshore area used by ships awaiting inshore anchorages or berths, located 3 nautical miles south of Long Beach, New York, which is the subject of a USCG Notification of Inquiry and is under consideration for the establishment of an anchorage ground. Furthermore, this commenter suggested that BOEM adopt the Marine Planning

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<sup>265</sup> US Coast Guard.

<sup>266</sup> Massachusetts Office of Coastal Zone Management.

<sup>267</sup> Responsible Offshore Development Alliance.

<sup>268</sup> World Shipping Council; The American Waterways Operators.

<sup>269</sup> World Shipping Council.

Guidelines detailed in the Navigation and Vessel Inspection Circular 01-19 with respect to AMMM measures.<sup>270</sup>

Multiple commenters said that one of the proposed lease areas, assigned to Mid-Atlantic Offshore Wind LLC, conflicts with USCG's proposed NY Bight cut-across fairway, which, if developed, would create navigation hazards in the NY Bight; consequently, the commenters argued that this area should not be developed or that BOEM should comprehensively analyze the associated vessel traffic impacts.<sup>271</sup>

### *Marine Radar*

Multiple commenters recommended that BOEM's PEIS include an analysis of potential impacts on marine radar, impacts that could interfere with search and rescue capabilities, and further suggested that USCG be given a role in assessing this risk and considering potential mitigation measures.<sup>272</sup>

Another commenter echoed this concern about impacts on marine radar and the need for mitigation measures.<sup>273</sup>

### *Liability*

A commenter questioned how BOEM intends to manage allision and height hazards, if BOEM plans to include safety zones, and if BOEM plans to hold vessels liable for collisions. This commenter further recommended that BOEM analyze the potential economic impacts of marine insurance companies raising premiums or denying coverage to operators in the area in response to increased vessel navigation risks.<sup>274</sup> Another commenter echoed the importance of BOEM addressing operator liability.<sup>275</sup>

### *Other Recommendations*

A commenter provided several recommendations for BOEM regarding navigation impacts, including that BOEM:

- Evaluate risk from vessel allisions, collisions, and groundings.
- Assess impacts from displacement of traffic.
- Analyze risk to smaller vessels during construction.
- Assess conflicts with concrete mattresses and scour protection measures.
- Assess impacts of cable exposures.

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<sup>270</sup> US Coast Guard.

<sup>271</sup> The American Waterways Operators; Clean Ocean Action.

<sup>272</sup> Seafreeze Shoreside, Seafreeze Ltd.; Responsible Offshore Development Alliance.

<sup>273</sup> New York State.

<sup>274</sup> Seafreeze Shoreside, Seafreeze Ltd.

<sup>275</sup> New York State.

- Develop a plan for mariner communications and conduct routine check-ins with the New York/New Jersey Harbor Safety, Navigation, and Operations Committee to promote mariner safety.
- Identify best practices to minimize disruption to fishing from boulder relocation.
- Explore adapting mobile gears to navigate tighter corridors and continue engaging stakeholders regarding such equipment.<sup>276</sup>

A commenter recommended that BOEM study navigation with NMFS and USCG, work closely with USCG and relevant experts to improve safety in the area, develop safety mitigation measures, and include stakeholders in developing navigational aids such as lighting and markings.<sup>277</sup>

A commenter recommended that BOEM consider safety measures for vessel operations at night and in other low visibility conditions, consider approaches to minimize daily vessel traffic, and chart and communicate the placement of equipment and relocation of boulders to reduce the potential for allisions and gear damage. The commenter also recommended that the PEIS provide for communication and engagement with fishing industry members regarding the timing and duration of survey and construction activities before they commence.<sup>278</sup>

#### O.4.20 Noise

Six commenters provided feedback on noise as it relates to the NY Bight PEIS.

Some commenters discussed noise-related issues in their submissions, mostly regarding how noise from offshore wind projects might impact marine species. One commenter expressed concern regarding the impact of noise on marine life and fisheries.<sup>279</sup> Another commenter requested the region-wide examination of underwater noise on wildlife populations.<sup>280</sup> One commenter requested the provision of ambient noise levels for the Proposed Action, evaluation of potential sound penalties for onshore tonal noise impacts, assessment of the adequacy of proposed mitigation measures, evaluation of the impacts of offshore wind activities on marine mammals, and consideration of vibration-related impacts.<sup>281</sup> One commenter said that the PEIS should fully evaluate the consequences of pile-driving activities on marine mammal species, specifically stating that the PEIS should address the research gap on baleen whales and pile-driving; consider mysticetes and odontocetes in the PEIS; assess the impact of acoustic masking on marine mammal reproduction; and assess the impacts of persistent noise on marine mammals.<sup>282</sup>

One commenter stated that the scope of the PEIS should be expanded to include the New Jersey Wind Energy Area to account for cumulative impacts from turbine operational noise, citing concerns about

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<sup>276</sup> New York State.

<sup>277</sup> Responsible Offshore Development Alliance.

<sup>278</sup> National Marine Fisheries Services.

<sup>279</sup> Mayor John A Peterson, Jr.

<sup>280</sup> New Jersey Offshore Wind Coalition.

<sup>281</sup> New York State.

<sup>282</sup> Clean Ocean Action.



impacts on North Atlantic right whale.<sup>283</sup> This commenter reviewed and cited research and submitted detailed analyses to support their position. The commenter suggested that the PEIS should contain estimates of elevated underwater noise levels based on studies they referenced and criticized BOEM for not including noise estimates from larger turbines. The commenter requested that the PEIS disclose the drive type of the turbines to be used for the projects and discussed their own analysis of research and its implications for expected turbine noise levels on masking North Atlantic right whale communication. They suggested that the PEIS should address how this masking from cumulative turbine operational noise could impact their migration capabilities.

Citing research on the adverse effects on marine wildlife from pile-driving noise, another commenter stated that “the installation of gravity-based or suction bucket (or ‘caisson’) foundations represents a ‘best practice’ in the context of the mitigation hierarchy.”<sup>284</sup> The commenter suggested that BOEM should coordinate with NMFS to characterize source noise levels during installation of foundations and use this information to ensure that installation mitigation and monitoring protocols are maximally protective. The commenter also urged BOEM to couple their foundation choice with a long-term monitoring program. The commenter suggested that BOEM design monitoring requirements to evaluate noise propagated through substrate during pile-driving by Rayleigh waves and their impacts on benthic invertebrates and demersal fish. The commenter also expressed concern about the impact of pile-driven bases of wind turbines impacting benthic creatures and suggested that mitigating this impact “would require acoustically decoupling the mast from the pile-driven base, or if the mast is below the waterline, acoustically decoupling the turbine from the mast.” They recommended BOEM include monitoring measures and adaptive management considerations for these issues in the PEIS.

This same commenter recommended using scientific information on the presence of marine mammals, especially the North Atlantic right whale, along with monitoring and mitigation systems to minimize impacts on these species. The commenter stated that no marine mammal species should be present in the Clearance Zone and that developers should only undertake pile-driving activities during times of good visibility or while using infrared technologies for visual monitoring. They also stated that pile-driving activities “should be commenced at least 1.5 hours before civil sunset” and that “lessees should not employ 24-hour pile driving.” The commenter discussed research and made specific recommendations about minimizing noise impacts, including requiring developers to use “the best commercially available combined NAS technology” and recommended soft-start procedures for pile-driving. The commenter cited research and commented on the impacts of vessel-related noise during wind farm construction, specifically noise produced by dynamic positioning systems, stating that BOEM should analyze these effects for individual projects and cumulatively. The commenter also recommended the use of “direct-drive turbines as opposed to turbines with a gear box” to minimize operational noise and impacts to marine species.

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<sup>283</sup> Save Long Beach Island, Inc.

<sup>284</sup> National Wildlife Federation et al.

## O.4.21 Oceanography

Seven commenters discussed issues related to oceanography in the NY Bight PEIS.

Several commenters expressed concern specifically about the impact that wind farms might have on the Mid-Atlantic Cold Pool.<sup>285</sup> One commenter called for considering the impacts on the Mid-Atlantic Cold Pool cumulatively by accounting for the impacts of nearby wind farms and cited research suggesting that it was particularly vulnerable to hydrodynamic changes from wind farm structures.<sup>286</sup> Citing research, another commenter expressed concern about the cumulative impacts of wind turbines on the Cold Pool and subsequent effects on scallops, surf clams, the ocean food web, marine habitats, and migratory patterns on the mid-Atlantic Shelf.<sup>287</sup>

Other commenters discussed various other topics related to ocean ecology. One commenter stated the need to consider and evaluate currents, bathymetry, microclimates, and MetOcean data.<sup>288</sup> Additionally, the commenter called for the evaluation of micro-gyres; circulation changes around structures; scouring and sedimentation from turbine bases, cables, and scour protection; air circulation changes and sea surface temperature impacts; and assessment of seafloor and land disturbances from various wind farm construction and operation activities. This commenter also called for the evaluation of impacts on a variety of biological resources related to ocean and coastal habitats including identifying best management practices to reduce risks to the oceanic environment. Another commenter stated that the sea surface microlayer may be compromised due to wind farm activities.<sup>289</sup> This commenter also expressed concern about the impact of wind turbines on wakes, stating that the PEIS should include analyses of how the wake effect would be avoided at the six lease sites. The commenter listed several concerns they suggested should be included in the PEIS including microclimate effects of turbines such as turbulence, impacts on water temperature, and impacts on the sea surface microlayer. Additionally, the commenter stated that cooling offshore wind conversion stations could impact marine mammals through their intakes and discharges and suggested that the PEIS should prioritize the analysis of this issue.

Some commenters discussed impacts on marine life due to oceanographic changes. Citing research, a couple of commenters expressed concern about the impact that wind farms might have on the ecology of the area and commercial fishing and wakes.<sup>290</sup> One commenter expressed concern about the impact of large turbine arrays on wind and ocean current patterns and the resulting impacts on scallops.<sup>291</sup> The commenter stated that wind farms will alter patterns of scallop larval settlement and generally degrade the seabed environment.

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<sup>285</sup> Fisheries Survival Fund; Save Long Beach Island, Inc.; New York State; Seafreeze Shoreside, Seafreeze Ltd.; Wallace & Associates; Clean Ocean Action.

<sup>286</sup> Fisheries Survival Fund.

<sup>287</sup> Save Long Beach Island, Inc.

<sup>288</sup> New York State.

<sup>289</sup> Clean Ocean Action.

<sup>290</sup> Wallace & Associates; Seafreeze Shoreside, Seafreeze Ltd.

<sup>291</sup> Fisheries Survival Fund.

One commenter stated that relying on historical data for future “blue economy” planning is no longer reasonable given the rapidly changing nature of the ocean and that planning should therefore be based on future ocean conditions.<sup>292</sup>

#### O.4.22 Other Uses

Three commenters provided feedback on other uses relevant in the NY Bight PEIS.

One commenter called for an analysis of preconstruction surveys, suggesting that this would “facilitate the National Oceanic and Atmospheric Association’s (NOAA) review, improve permitting efficiencies and consistency across projects, and ensure projects have sufficient time to collect at least two (2) years of baseline data.”<sup>293</sup> The commenter also urged BOEM to minimize disruptions to State and federal fisheries surveys through coordination with NOAA NMFS. They further called for the identification of U.S. Military training and exercises. Another commenter encouraged BOEM and developers to consider engaging with the fishing community during surveys as part of safety planning and risk identification.<sup>294</sup>

#### O.4.23 Recreation and Tourism

Seven commenters provided comments on recreation and tourism issues relevant to the NY Bight PEIS.

Some commenters expressed general concerns about the negative impacts that offshore wind projects may have on tourism economies, including lost revenue for businesses and jobs, and impacts on recreation.<sup>295</sup> One commenter asked if studies had been conducted investigating the impact on tourism and local economies due to turbines being visible from the shoreline.<sup>296</sup> Another commenter discussed the importance of tourism to the Fire Island National Seashore and Gateway National Recreation Areas.<sup>297</sup> A commenter also recommended evaluating measures to maintain public access and coastal use, tourism and recreational activities, and avoiding construction during peak tourism periods.<sup>298</sup> The commenter also mentioned that their respective Department of State had developed datasets for offshore diving and surfing areas important to their State and provided links to the datasets.

#### O.4.24 Scenic and Visual Resources

Approximately 10 commenters provided comments on scenic and visual resources.

Several commenters mentioned scenic and visual resources. Some commenters expressed general concern about and called for consideration regarding the visibility of wind turbines.<sup>299</sup> One commenter called for the elimination of visual assessments, stating that with the exception of Lease Area 544, the

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<sup>292</sup> Robert Griffin.

<sup>293</sup> New York State.

<sup>294</sup> NJDEP.

<sup>295</sup> Long Island Commercial Fishing Association; Mayor John A Peterson, Jr.; James Binder; Kimberly Dreher.

<sup>296</sup> Twin Lights Historical Society.

<sup>297</sup> National Park Service.

<sup>298</sup> New York State.

<sup>299</sup> New York State; Twin Lights Historical Society; Kimberly Dreher; James Binder.

NY Bight lease areas are more than 40 miles from the nearest shoreline.<sup>300</sup> A commenter stated that the PEIS should address the visual impacts of turbines, such as which communities or parks they would be visible from, the extent to which turbines would be visible, the weather conditions in which they would be visible, and how often the turbines would be visible throughout the year.<sup>301</sup>

Some commenters discussed how wind turbines might impact historic sites. One commenter stated that the PEIS should evaluate the cumulative impacts of new leasing areas and the Empire Wind Projects on “the uninterrupted sea view from the seven ocean-front historic districts and 31 miles of ocean beaches, dunes and water” and specified key observation points from the Gateway National Recreation Area to be included in the assessment.<sup>302</sup> The commenter recommended the same for visual impacts at Fire Island, similarly including key observation points for analysis and suggesting that their staff can assist with more detailed discussions on these topics. The commenter further recommended the inclusion of the Empire State Building, Green-Wood Cemetery, and Twin Lights Historic Site as National Historic Landmarks in the PEIS along with assessment of potential visual impacts.

One commenter recommended that BOEM “further define the ‘historic maritime setting’ in the PA or in subsequent guidance.”<sup>303</sup> Additionally, the commenter encouraged BOEM to “ensure that the PA recognize that impacts from NYB projects on historic properties will vary significantly and are dependent on location of the turbines and export cables” and further recommended the development of a “consistent metric by which NHPA [National Historic Preservation Act] effects determinations are made across all NYB [NY Bight] projects.” Another commenter suggested that they did not understand how BOEM would model visual assessment in the Cape May County and Point O’Woods areas.<sup>304</sup> The commenter stated that all historic districts, National Historic Landmarks, and properties listed or eligible for inclusion in the National Register of Historic Places should be included in vantage point simulations and specifically requested the inclusion of the Cape May Historic District and Point O’Woods. They also called for the consideration of lighting impacts on the night sky. Another commenter suggested that a turbine exclusion zone of at least 17.2 miles should be established in the Beach Haven Historic District to minimize adverse visual impacts on historic resources.<sup>305</sup>

#### O.4.25 Sea Turtles

Three commenters provided comments on sea turtles.

A few commenters mentioned sea turtles. One commenter recommended that the PEIS include a threat analysis matrix for endangered sea turtles living in the NY Bight area and cumulative impacts.<sup>306</sup> The commenter further recommended prioritizing “research to fill gaps in baseline data on sea turtle distributions, abundance, habitat use, and movements above stressor-specific investigations of effect to

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<sup>300</sup> Ted Barten.

<sup>301</sup> EPA.

<sup>302</sup> National Park Service.

<sup>303</sup> Attentive Energy LLC.

<sup>304</sup> Cape May County, NJ; Point O’Woods Association, Fire Island, NY.

<sup>305</sup> Borough of Beach Haven.

<sup>306</sup> Clean Ocean Action.

turtles, such as artificial reef effects, entanglements, vessel strike, or EMF.” The commenter additionally stated there is no empirical data on noise threshold levels that would impact sea turtles and that the PEIS should consider the impacts on threshold shift and suggested that the PEIS should require the development of best practices by developers to minimize impacts on sea turtles. Another commenter called for consideration of the cumulative impact of wind project construction and operations on sea turtles, including noise, vessel traffic, EMF, and recommended visual and acoustic monitoring to detect sea turtles so construction can be avoided when they are present.<sup>307</sup> One commenter requested the identification of seasonal distribution, abundance, and migration routes of sea turtles and the evaluation of behavior and physiological impacts from vessel traffic, noise, foundation lighting, and EMF.<sup>308</sup>

#### O.4.26 Water Quality

Four commenters provided comments on water quality.

One commenter called for a review of the impacts of offshore wind on water quality.<sup>309</sup> Another commenter called for the evaluation of several factors related to sediment and deposition effects caused by offshore wind activities in the NY Bight area.<sup>310</sup> This commenter called for consideration of water quality impacts including considering New York State Water Quality Standards, modeling of the extent and duration of turbidity impacts, evaluation of changes to dissolved oxygen or nutrients in the overlying water column, and evaluation of cooling water intake structures on circulation and temperatures. The commenter further called for assessing the impacts of inadvertent spills, evaluation of methods for managing debris and waste, and considering impacts from cable heat transfer.

One commenter suggested that if vessels originating in foreign ports will be used during construction or maintenance of the wind farm projects, the PEIS should explain how they will prevent the discharge of ballast water to prevent the introduction of nonnative marine organisms.<sup>311</sup> The commenter expressed concern that discharge of pollutants may require National Pollutant Discharge Elimination System authorization and further recommended that the PEIS address whether the project will result in the discharge of pollutants into the water. This commenter also requested that BOEM consider the goals of the Comprehensive Conservation and Management Plan for the Barnegat Bay-Little Egg Harbor Estuary (e.g., water quality, water supply, living resources, and land use), which the Clean Water Act has designated an estuary of national significance.

A commenter called for the PEIS to fully investigate potential impacts of wind farm activities on ecologically important waterways and coastal habitats, drawing special attention to the New York/New Jersey Harbor Estuary, Peconic Bay Estuary, Barnegat Bay Estuary, Hudson Bay Estuary Program, Long Island South Shore Estuary Reserve, Hudson River National Estuarine Research Reserve, and Jacques

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<sup>307</sup> National Wildlife Federation et al.

<sup>308</sup> New York State.

<sup>309</sup> Mayor John A Peterson, Jr.

<sup>310</sup> New York State.

<sup>311</sup> EPA.

Cousteau National Estuarine Research Reserve.<sup>312</sup> The commenter also stated that the PEIS should “evaluate worst case scenarios to determine impacts and assure emergency response capabilities will be available to ensure water quality” should vessel collisions cause a spill. The commenter suggested that the PEIS evaluate all risks and mitigation plans to account for the possibility of oil spills due to collisions. The commenter stated that it is likely the case that current design specifications (e.g., related to corrosion, corrosion protection) may not “capture the corrosivity of the environment, likely rendering impacts far different from any kind of assessments,” and that industry codes for wind energy are not yet fully developed.

#### **O.4.27 Wetlands and Other Waters of the United States**

Three commenters provided comments on wetlands and other water resources in the United States.

A few commenters mentioned wetland and other water topics. One commenter stated that Executive Order 11990 Protection of Wetlands requires federal agencies to minimize degradation of wetlands and recommended the implementation of best management practices to comply with this directive.<sup>313</sup> They further suggested that the PEIS should assess impacts “that could result in a change (either permanent or temporary) of cover type within a wetland.” This commenter additionally stated that impacts on streams and wetlands should be avoided or minimized in accordance with Section 404 of the Clean Water Act, that aquatic resources in the area should be delineated according to the 1987 Corps of Engineers Wetlands Delineation Manual and Regional Supplement. and that an evaluation of “cumulative effects of onshore activities at a watershed scale (i.e., hydrologic unit code 12) be provided to ensure that measures are undertaken to avoid and minimize the potential of cumulative impacts.”

Citing research and discussing the importance of wetlands, another commenter called for the PEIS to identify and evaluate the potential impacts on wetlands due to wind energy development in the NY Bight and consider how impacts could be avoided and minimized.<sup>314</sup> The commenter also mentioned Executive Order 11990 and Section 404 of the Clean Water Act and stated that the PEIS must go beyond acknowledging the importance of wetlands and identify mitigation measures. The commenter suggested a testing a pilot project to improve data on wind energy development before undertaking industrial-scale development. Another commenter called for evaluating potential impacts of transmission installations on wetlands, inland waters, and their species; evaluating the impacts of clearing vegetation near “designated Wild, Scenic, & Recreational Rivers (WSR) and NYS Significant Coastal Fish and Wildlife Habitats (SCFWF)”); and evaluating impacts on freshwater and tidal wetlands in the area.<sup>315</sup> This commenter also called for evaluating impacts on saltmarshes and identifying protective measures, stating the significance of saltmarshes to New York State's marine district.

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<sup>312</sup> Clean Ocean Action.

<sup>313</sup> EPA.

<sup>314</sup> Clean Ocean Action.

<sup>315</sup> New York State.

#### O.4.28 Comments on Other Resource or Stressor Topics

Nine commenters provided comments on other resource or stressor topics.

Several commenters discussed various other issues related to resources or stressor topics. A couple of commenters mentioned using wind turbines to facilitate aquaculture or biodiversity. One commenter asked whether the government had considered establishing oyster beds or artificial reefs for wildlife at wind turbine bases.<sup>316</sup> Another commenter asked whether there were plans to employ aquaculture structures at the base of wind turbine foundations to “create habitats for mussels, oysters, sea weed and other sea life,” suggesting that such structures could improve water quality and reduce reliance on sea food imports.<sup>317</sup> The commenter also asked how private companies could obtain permits to create, manage, and monetize such aquacultures. This commenter also asked how much energy would be generated for the NY Bight area and Monmouth County specifically and whether this proposal would eliminate fossil fuel use in the area. One commenter that BOEM adopt “net positive” biodiversity goals to guide the maintenance and enhancement of species and habitats impacted by offshore wind development.<sup>318</sup>

A couple of commenters mentioned security issues. One commenter recommended identifying emergency preparedness measures for severe storm events.<sup>319</sup> Another commenter expressed concern about offshore wind turbines’ vulnerability to war time or terrorist attacks and stated that the issue should be addressed in the PEIS.<sup>320</sup>

One commenter stated that offshore wind energy is not emissions-free and argued that the “emissions from the activities necessary to prepare, build, operate, maintain, and decommission offshore wind energy facilities” should be included in the PEIS.<sup>321</sup> The commenter called for BOEM to address issues related to the amount of fossil fuel displacement that would occur due to offshore wind energy production. The commenter stated that it was unclear which State will receive the energy from the leases. The commenter additionally stated that the PEIS “must include all areas from where materials will be sourced for offshore wind project components in the environmental review,” along with emissions data from turbine infrastructure production. The commenter called for the PEIS to evaluate secondary impacts related to onshore development needed to support the lease sales, management of dredged material, turbine malfunction, and security issues. This commenter expressed concern that wind energy development in the NY Bight requires the mining of rare earth elements with environmental consequences and suggested that the PEIS should consider these.

One commenter suggested requiring real-time cable monitoring technology for rapid identification of hazards, performing “micro siting” of wind energy infrastructure with fishermen familiar with the

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<sup>316</sup> Jeffrey Tyler.

<sup>317</sup> Twin Lights Historical Society.

<sup>318</sup> The Nature Conservancy.

<sup>319</sup> New York State.

<sup>320</sup> James Binder.

<sup>321</sup> Clean Ocean Action.

ecosystem, and coordinating transmission to minimize infrastructure in the water and seabed.<sup>322</sup> This commenter also suggested defining thresholds to determine when environmental impacts are unacceptable and establishing adaptive management procedures. Another commenter discussed the importance of night skies and recommended the following: requiring an Aircraft Detection Lighting System to turn aviation obstruction lights on and off in response to detection of aircraft, shielding and directing security lighting downward, keeping lights off when they are not needed, using the minimum necessary brightness, using warm color-temperature lights, and requiring lighting plans in project-specific EISs.<sup>323</sup>

One commenter submitted comments on several various resource topics.<sup>324</sup> The commenter requested that BOEM consider changes that they would like acknowledged in the Draft PEIS including the impact of automation on the potential for job creation; the reliability and storage capabilities of wind energy systems; advancements in other types of renewable energy technologies; and the cost of offshore wind alternatives, among other issues. The commenter stated that the cost of offshore wind power is high, even after subsidies, suggested that those who use electricity derived from wind energy will have to pay more than they would for natural gas, and questioned how power grid transmission needs would be financed. The commenter questioned whether there was a federal agency that would be performing an analysis, comparing the cost reliability of wind energy to other clean technology alternatives, and requested that BOEM identify and assess backup technologies needs and plans if offshore wind output is rendered insufficient due to storms or low wind. The commenter stated onshore alternatives to offshore wind were available that could meet clean energy needs and questioned why they were not being considered. The commenter mentioned as an alternative the upgrading of “natural gas power plants to include combined cycles power generation.” The commenter requested that BOEM “present a numeric analysis of impacts on greenhouse gas emissions of the Proposed Action and compare those emissions reductions to the increases in global greenhouse gas emissions.” The commenter requested an analysis of the benefits of onshore clean technology.

## **O.5 National Historic Preservation Act/Section 106 and Programmatic Agreement**

Comments associated with the National Historic Preservation Act (NHPA)/Section 106 process are discussed in this section.

### **O.5.1 Programmatic Agreement**

Four commenters provided comments on the NHPA Programmatic Agreement.

A commenter supported BOEM’s intention to develop an NHPA Section 106 Programmatic Agreement (PA) and recommended including, as consulting parties, the New York and New Jersey State Historic

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<sup>322</sup> Responsible Offshore Development Alliance.

<sup>323</sup> National Park Service.

<sup>324</sup> James Binder.



Preservation Officers (SHPOs). The commenter also recommended including in the consulting parties from the Empire Wind development, the Advisory Council on Historic Preservation, and Native American Tribes. They cited 36 Code of Federal Regulations (CFR) 800.4(a)(2) as the engagement of the New York and New Jersey SHPOs as PA consulting parties.<sup>325</sup> Another commenter agreed that BOEM should coordinate with New York State’s Office of Parks, Recreation and Historic Preservation (NYS OPRHP), which houses the State’s SHPO.<sup>326</sup>

Another commenter recommended that BOEM develop a system to streamline Section 106 PAs for individual COPs by tiering them off the PA. The commenter added that impacts on historic resources will vary widely depending on the location of turbines and export cables, reasoning that, for instance, turbines located more than 23 miles from the shore may not be visible. The commenter recommended that BOEM develop consistent metrics to apply for NHPA determinations across the NY Bight COPs.<sup>327</sup>

The commenter also requested that BOEM provide more information as to when Section 106 consultations for the NY Bight will take place and conclude; they stated that geophysical surveys for windfarm development will need to take place soon and that the PA could impact the scale and scope of geophysical surveys to identify marine archaeological resources. Thus, the commenter wrote, information from BOEM as to when the PA will be available will help in the geophysical survey planning process.<sup>328</sup>

Another commenter stated that it accepted BOEM’s invitation to become an NHPA Section 106 consulting party.<sup>329</sup>

## **O.5.2 Impacts on Historic Properties**

Three commenters provided comments on impacts on historic properties.

A commenter cited Section 106 as requiring that federal agencies consider the impacts of their actions on historic properties. The commenter stated that, during recent virtual public meetings, consulting parties raised concerns about BOEM’s process for identifying historic properties, addressing adverse impacts, and creating a framework to mitigate adverse impacts in a manner proportionate to their threat.<sup>330</sup> Another commenter generally requested that BOEM consider impacts on historic resources, including “submerged landforms.”<sup>331</sup>

A commenter anticipated that the projects would have no impact on the visual character of onshore resources because the projects would be 42 and 54 miles offshore. The commenter further stated that BOEM has previously found wind turbines to cause adverse impacts on “historic maritime settings.” The

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<sup>325</sup> National Park Service.

<sup>326</sup> New York State.

<sup>327</sup> Attentive Energy LLC.

<sup>328</sup> Attentive Energy LLC.

<sup>329</sup> Invenergy Wind Offshore LLC.

<sup>330</sup> Cape May County, NJ; Point O’Woods Association, Fire Island, NY.

<sup>331</sup> New York State.

commenter requested that BOEM provide a definition of this term in the PA or other guidance. The commenter added that current conditions, such as vessel traffic, aircraft, modern structures, nighttime lighting, and other modern elements already compromise the “historic maritime settings” from the view of historic properties.<sup>332</sup>

### **O.5.3 Identification of Historic Properties Under NHPA**

Three commenters provided comments on the identification of historic properties under NHPA.

A commenter provided several comments regarding the identification of historic properties under NHPA. The commenter provided an overview of National Historic Landmarks and the procedural safeguards afforded to the properties by NHPA Sections 106 and 110(f). The commenter stated that it has statutory responsibility for two National Parks and several National Historic Landmarks in the NY Bight and provided information in its comment to respond to BOEM’s request for feedback regarding the identification of historic properties in the area. It described the Carrington Estate, several structures at Fire Island National Seashore, and locations at the Gateway National Recreation Area as historic properties that could be impacted by NY Bight development. The commenter requested that these National Parks and National Historic Landmarks be included in BOEM maps illustrating the NY Bight, offering to assist in this request by providing location data.<sup>333</sup> Also providing information on nearby historic properties, another commenter wrote that, pursuant to responsibility delegated to it by the New Jersey State Legislature, it has designated a historic district in Beach Haven that could be impacted by NY Bight development.<sup>334</sup>

A commenter recommended that BOEM design a phased identification process for marine archaeological resources within the NY Bight. The commenter suggested using, per 36 CFR 800.4(b)(2), phased identification efforts in progressively narrower surveys rather than implementing 30-meter survey intervals at the outset. The commenter reasoned that using 30-meter survey intervals results in overly detailed surveys of areas that development, because of preferred alternative selection or project design, ultimately would not affect. The commenter stated that using survey intervals of this precision increases costs and impacts on marine life. Application of a 30-meter survey interval to identify smaller, buried marine cultural resources could be done within the project footprint, the commenter suggested, following the issuance of a Record of Decision.<sup>335</sup>

## **O.6 Consultations**

Comments associated with the various consultations are discussed in this section.

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<sup>332</sup> Attentive Energy LLC.

<sup>333</sup> National Park Service.

<sup>334</sup> Borough of Beach Haven.

<sup>335</sup> Attentive Energy LLC.

## O.6.1 ESA

Three commenters provided comments on ESA consultations.

A commenter emphasized that the ESA and Essential Fish Habitat (EFH) consultations are complementary and should be treated as such. The commenter reasoned that ESA and EFH consultations rely on standard project design criteria to avoid, minimize, and monitor impacts on ESA-listed species, designated critical habitats, and EFH.<sup>336</sup> A commenter recommended that BOEM integrate a framework for the ESA and EFH compliance, arrived at through coordination with NMFS and USFWS, into the purpose and need, alternative analysis, and effects analysis portions of the PEIS.<sup>337</sup>

Another commenter recommended that BOEM implement a programmatic process to facilitate interagency coordination itself and NOAA/NMFS in their ESA consultations for specific COPs.<sup>338</sup>

## O.6.2 EFH

A commenter emphasized that the ESA and EFH consultations are complementary and should be treated as such. The commenter reasoned that ESA and EFH consultations rely on standard project design criteria to avoid, minimize, and monitor impacts on ESA-listed species, designated critical habitats, and EFH.<sup>339</sup>

## O.6.3 Other (e.g., Marine Mammal Protection Act, Coastal Zone Management Act)

Five commenters provided general comments on other consultations, such as the Marine Mammal Protection Act (MMPA) and Coastal Zone Management Act (CZMA).

### O.6.3.1 MMPA and CZMA

A commenter recommended a programmatic process be used to facilitate interagency coordination between BOEM and NOAA/NMFS in their MMPA consultations for specific COPs.<sup>340</sup> A commenter wrote that it may issue an incidental take authorization under MMPA for wind project development but that such an authorization would likely require further NEPA documentation. The commenter stated that, properly developed, a PEIS could support the issuance of a letter of authorization covering all COPs.<sup>341</sup>

A commenter stated that it is important to align the timing of CZMA reviews with New York Department of State (NYS DOS) Coastal Management Programs.<sup>342</sup>

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<sup>336</sup> National Marine Fisheries Services.

<sup>337</sup> Invenergy Wind Offshore LLC.

<sup>338</sup> American Clean Power Association.

<sup>339</sup> National Marine Fisheries Services.

<sup>340</sup> American Clean Power Association.

<sup>341</sup> National Marine Fisheries Services.

<sup>342</sup> New York State.

### O.6.3.2 General Comments on Governmental Consultations

A few commenters generally recommended that BOEM coordinate with other federal agencies at the PEIS stage rather than only for specific projects.<sup>343</sup> One of the commenters reasoned that early coordination would help in cumulative analyses and in designing mitigation strategies, but also suggested that BOEM consider lessons learned in other OCS regions and avoid “artificial restrictions” that could prevent full utilization of the NY Bight.<sup>344</sup>

A commenter stated that BOEM should, under 43 United States Code 1337(p)(7), consider affected States’ offshore wind procurement goals in evaluating NY Bight projects under NEPA and the Outer Continental Shelf Lands Act (OCSLA), reasoning that these goals are vital to the States’ interest in the permitting process.<sup>345</sup> A commenter requested that BOEM continue to coordinate with New York through the PEIS and COPs processes, stating that New York State agencies will have statutory obligations to approve offshore wind transmission projects as well as transmission line siting. The commenter attached a document detailing the NYDOT’s legal authorities relevant to NY Bight developments. Overall, the commenter recommended that BOEM coordinate with NYS DPS, NYSDOT, OPRHP, NYSDEC, and NYS DOS, with NYS DOS formally requesting to be a NEPA cooperating agency. The commenter also requested that BOEM confirm that the PEIS will not authorize development activities and that BOEM would not initiate federal consistency reviews at the PEIS stage.<sup>346</sup>

## O.7 Comments on the Scoping Process

Three commenters provided comments on the scoping process.

A commenter recommended that BOEM use the scoping process to clarify a compensatory mitigation approach based on the best available science and designed to maximum ecological benefits, especially with respect to protecting biological diversity. The commenter recommended mitigation efforts such as acquiring critical coastal land or using management strategies to abate threats, and added that targeted properties for mitigation and monitoring may be outside the footprint of the projects themselves.<sup>347</sup>

Another commenter stated that the PEIS should consider impacts related to decommissioning, reasoning that such impacts are foreseeable and thus required under NEPA. Additionally, the commenter stated that decommissioning would be a major regional impact, and thus appropriate to analyze in the PEIS. The commenter added that decommissioning efforts can be expensive, describing one project in which decommissioning accounted for 20 percent of project costs.<sup>348</sup> Also addressing decommissioning, a commenter requested information on anticipated decommissioning of cable protection and scour protection areas. The commenter supported BOEM requiring the removal of

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<sup>343</sup> The Nature Conservancy, Atlantic Shores Offshore Wind, LLC.

<sup>344</sup> Atlantic Shores Offshore Wind, LLC.

<sup>345</sup> American Clean Power Association.

<sup>346</sup> New York State.

<sup>347</sup> The Nature Conservancy.

<sup>348</sup> Save Long Beach Island, Inc.

generation and transmission infrastructure during decommissioning, as long as such efforts would be accompanied by monitoring and contamination control measures.<sup>349</sup>

## O.8 Other Comments

This section discusses comments that generally fell into miscellaneous categories.

### O.8.1 Comments on NEPA Cooperating Tribal Government and Cooperating or Participating Agencies

Approximately 10 commenters provided comments on NEPA Cooperating Tribal Government and cooperating or participating agencies consultations.

#### O.8.1.1 Tribal Consultations

A commenter recommended that, to the extent federally recognized Tribes are impacted by activities described in the PEIS, the PEIS include a description of the processes and outcomes of consultations with Tribal Nations.<sup>350</sup> Another commenter stated that “the Delaware Nation; the Delaware Tribe; Cayuga; Mohican; Shinnecock; and Stockbridge-Munsee Community, Wisconsin; and one State recognized Tribe, the Unkechaug” have interests in the south shore of Long Island, urging BOEM to consult with these Tribes throughout the NY Bight OCS process.<sup>351</sup> Another commenter recommended that BOEM take a lead role in organizing tribal outreach for the NY Bight for both Section 106 consultations and NEPA cooperation; the commenter reasoned that doing so would promote efficiency and, consistent with an August 1, 2022, BOEM letter, reduce stakeholder burdens.<sup>352</sup>

#### O.8.1.2 Interagency Coordination

A commenter recommended that BOEM coordinate with NOAA, the United States Army Corps of Engineers (USACE), and the Advisory Council on Historic Preservation to ensure that the agencies conduct programmatic analyses in parallel with the PEIS, agree on AMMM measures, and commit to similar timelines.<sup>353</sup> Another commenter agreed, stating that a standalone PEIS from BOEM, without interagency consultation, would be inefficient.<sup>354</sup>

A commenter stated that it would, in a separate letter, accept cooperating agency status under NEPA for the PEIS and consulting party status under NHPA.<sup>355</sup>

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<sup>349</sup> New York State.

<sup>350</sup> EPA.

<sup>351</sup> New York State.

<sup>352</sup> Invenergy Wind Offshore LLC.

<sup>353</sup> American Clean Power Association.

<sup>354</sup> Invenergy Wind Offshore LLC.

<sup>355</sup> National Park Service.

A commenter stated that, given the scope of the PEIS, BOEM should collaborate with “NMFS, state fishery agencies, fishery management councils and commissions, ocean data experts including the Regional Ocean Partnerships, United States Integrated Ocean Observing System (IOOS), [and the] NOAA National Centers for Coastal Ocean Science (NCCOS),” and should also consider fishing industry-held data and “fishermens’ [sic] ecological knowledge.”<sup>356</sup> Another commenter stated that the New Jersey Research and Monitoring Initiative (RMI) studies marine and coastal resources concerns related to New Jersey offshore wind development and has partnered with NYSERDA, the Regional Wildlife Science Collaborative, and the Responsible Offshore Science Alliance. The commenter supported BOEM coordinating research and monitoring efforts.<sup>357</sup> A commenter stated that input from other agencies is still needed, providing as an example a take request from NMFS for North American right whales.<sup>358</sup>

Another commenter agreed, reasoning that consulting agencies may have focuses other than energy development and thus that BOEM should insist on relevant statutory deadlines—in particular, the commenter emphasized the importance of close coordination between BOEM and NOAA, USACE, USFWS, and the Advisory Council on Historic Preservation to ensure an efficient review process.<sup>359</sup>

A commenter stated that, in previous offshore wind leasing projects, there has been insufficient coordination with local governments; the commenter raised the “Rhode Island SAMP [Special Area Management Plan] process” and Vineyard Wind as examples in which New York fisherman had too little representation.<sup>360</sup>

## **O.8.2 Comments on Potential Authorizations**

No comments are associated with this issue.

## **O.8.3 Comments on the Timeline for the Notice of Availability of the Draft PEIS**

Eight commenters provided comments on the timeline for the Notice of Availability (NOA) of the Draft PEIS.

Several commenters supported the programmatic approach, emphasizing its importance in expediting reviews and ultimately the authorization of COPs.<sup>361</sup> A couple of commenters also recommended that BOEM should take an active role to ensure that environmental reviews remain on schedule.<sup>362</sup> A commenter emphasized the importance of timeliness in environmental reviews for the NY Bight and recommended that BOEM impose a firm schedule for its consultations with NOAA, USACE, and other agencies.<sup>363</sup>

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<sup>356</sup> Responsible Offshore Development Alliance.

<sup>357</sup> NJDEP.

<sup>358</sup> J. Binder.

<sup>359</sup> Community Offshore Wind.

<sup>360</sup> Long Island Commercial Fishing Association.

<sup>361</sup> Invenergy Wind Offshore LLC, Community Offshore Wind.

<sup>362</sup> Community Offshore Wind, OW Ocean Winds East, LLC.

<sup>363</sup> Atlantic Shores Offshore Wind, LLC.

To facilitate the PEIS's role in expediting the NY Bight environmental reviews, a commenter recommended that drafts for specific COPs be initiated before the finalization of the PEIS; the commenter reasoned that doing so would provide flexibility for different tiering approaches and ensure the PEIS does not inhibit project-specific reviews.<sup>364</sup> Another commenter also emphasized that the PEIS process should be concluded within 2 years. As part of that process, the commenter stated that the representative project design envelope (RPDE) should be defined and the AMMM measures selected in a manner consistent with leaseholder needs; in particular, the commenter stated that AMMM measures should include reasonably foreseeable options. The commenter stated that, to facilitate timeliness, the scope of the PEIS should include all issues common across the NY Bight.<sup>365</sup>

Conversely, another commenter questioned the role of a PEIS in expediting the leasing process, stating that, in the August 2 meeting, BOEM statements on PEIS efficiency failed to recognize the capacity for developers to quickly collect field data and prepare for COPs. The commenter also stated that New York and New Jersey appear prepared to move forward with leasing, stating that "NYSERDA has teed up RFP3S, (2,000 MW minimum) while NJ BPU has teed up RFP 3 for Q1, 2023 (1,200 MW minimum)." The commenter questioned if developers, New York, and New Jersey agreed with the PEIS approach. In considering impacts on timeliness, the commenter stated that BOEM should consider the impact of delays on carbon dioxide emissions.<sup>366</sup> Another commenter expressed concern that the PEIS could impose delays because the process for offshore wind development is untested.<sup>367</sup>

Another commenter expressed concern for an expedited NY Bight PEIS timetable. The commenter stated that ongoing litigation involving wind turbines could impact developer permitting goals.<sup>368</sup> Another commenter stated that the "Fast 41" initiative, and the fast-tracking of development, serves private developers' interests at the expense of BOEM's duty to hold offshore resources in the public trust. The commenter expressed concern for the impacts of NY Bight development to marine life and stated that 60 days for review should be provided for the environmental review documents relevant to the project.<sup>369</sup>

#### **O.8.4 Comments on Public Comment Process/Engagement**

Approximately 10 commenters provided comments on the public comment process or engagement.

##### **O.8.4.1 Public Outreach**

A commenter recommended that BOEM develop a Community Outreach Plan to include in NEPA documentation and ensure that documentation is available to linguistically isolated communities.<sup>370</sup> Another commenter generally agreed that the BOEM should make efforts towards public participation

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<sup>364</sup> Attentive Energy LLC.

<sup>365</sup> Community Offshore Wind.

<sup>366</sup> T. Barten.

<sup>367</sup> OW Ocean Winds East, LLC.

<sup>368</sup> Cape May County, NJ; Point O'Woods Association, Fire Island, NY.

<sup>369</sup> Clean Ocean Action.

<sup>370</sup> EPA.

and consultation with local communities.<sup>371</sup> A commenter stated that BOEM should continue to engage with the public and stakeholders in the scoping process for NY Bight environmental reviews.<sup>372</sup>

A commenter provided a citation in recommending that BOEM convene a roundtable with DAC stakeholders as part of PEIS development. The commenter recommended identifying DACs by coordinating with the Intergovernmental Renewable Energy Task Force and by using a Climate and Economic Justice Screening Tool. The commenter attached a sample agenda for such a roundtable. The commenter also recommended that BOEM post documentation and notes relevant to DAC outreach and engagement to the BOEM website, similar to BOEM practices for the Intergovernmental Renewable Energy Task Force.<sup>373</sup> Another commenter stated that BOEM should consider implementing an adaptive management plan to address the possibility of environmental impacts that become more significant than initially anticipated. The commenter stated that this plan may include roles for non-fishing stakeholders or community liaisons. In addition, the commenter recommended that BOEM develop a mariner communication plan.<sup>374</sup>

A commenter stated that some of the benefits of the PEIS approach could be realized by coordinating with developers, citing the 1- by 1-nautical mile east–west/north–south grid agreed upon by developers in the Massachusetts WEA.

#### O.8.4.2 Public Comment Process

A commenter suggested that 45-day comment periods be provided for NY Bight environmental reviews and added that commenters should, because of the tiering approach to reviews, have the right to revisit and comment further on COP-specific NEPA analyses beyond this period.<sup>375</sup> Another commenter requested that all future environmental review documents, including environmental assessments, be available in draft form for public comment.<sup>376</sup>

A commenter expressed concern that the NY Bight environmental review processes have not been concluded before leases are awarded to developers. The commenter stated that the public comment period for the NY Bight has been too short and that public hearings should be held. Furthermore, the commenter stated that BOEM has privileged the importance of New York’s interests, rather than those of New Jersey, in the NY Bight project.<sup>377</sup> Another commenter stated that BOEM has recently entered into several “fast-tracked” memoranda of understanding and PAs relevant to offshore wind; the commenter stated that BOEM should clarify how these fast-tracked documents are being implemented for NY Bight lease developments and environmental reviews.<sup>378</sup>

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<sup>371</sup> New York State.

<sup>372</sup> Invenergy Wind Offshore LLC.

<sup>373</sup> Aspen Institute.

<sup>374</sup> New York State.

<sup>375</sup> US Coast Guard.

<sup>376</sup> New England and Mid-Atlantic Fishery Management Councils.

<sup>377</sup> Borough of Seaside Park.

<sup>378</sup> Clean Ocean Action.



A commenter recommended that lessees in contiguous areas consolidate their public outreach processes for the fishing industry, reasoning that, for instance, there are similar interests for scallop fishers across all six lease areas.<sup>379</sup>

#### O.8.4.3 Transparency and Information Availability

A commenter stated that good governance requires public trust in project development and transparency.<sup>380</sup> Additionally, the commenter stated that research on wind farm impacts is disparate and that creating a centralized portal for this research would be useful. The commenter emphasized the importance of the PEIS using the best available science and dynamic modeling based on multiple scenarios. The commenter stated that, in evaluating research, BOEM should consider whether research comes from disinterested parties or researchers with conflicting financial motivations.<sup>381</sup> Another commenter also recommended that BOEM support a centralized data portal for information on the environmental impacts of offshore wind development.<sup>382</sup>

#### O.8.5 Request to Extend Public Comment Period

Two commenters provided comments about extending the public comment period.

A commenter recommended that the comment period for the programmatic DEIS “be extended by a minimum of 3 months” from the 45-day norm, and that BOEM issue a supplemental EIS if more information or inputs become available later.<sup>383</sup>

A commenter recommended that the comment period for the PEIS scoping be extended.<sup>384</sup> Another commenter stated that the public comment period for NY Bight development was too short.<sup>385</sup>

#### O.8.6 Comments on the Programmatic Approach

Approximately 10 commenters provided comments on the programmatic approach.

##### O.8.6.1 Support for the Programmatic Approach

A commenter supported the use of a PEIS in the NY Bight as the best way to assess impacts and examine alternatives. The commenter also stated that the PEIS standpoint will allow BOEM to examine potential export cable connection points and identify AMMM measures. However, the commenter questioned how the proposed framework would parse negligible, minor, moderate, and major impacts. The commenter recommended that the PEIS compare alternative, full build-outs for the NY Bight—rather than a representative project—and consider requiring a suite of AMMM measures as conditions of COP

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<sup>379</sup> Fisheries Survival Fund.

<sup>380</sup> Clean Ocean Action.

<sup>381</sup> Clean Ocean Action.

<sup>382</sup> R. Griffin.

<sup>383</sup> J. Binder.

<sup>384</sup> J. Binder.

<sup>385</sup> Borough of Seaside Park.

approval. The commenter recommended that BOEM utilize representative projects for each lease as appropriate for a basic review of protected species, habitat, fisheries overlaps, and navigational conflicts for a full build-out analysis.<sup>386</sup> Another commenter also expressed support for the programmatic approach, anticipating that the PEIS would include planning for offshore wind infrastructure to minimize impacts on natural resources. The commenter also emphasized the importance of, within the PEIS, standardizing data collection for research and monitoring of impacts on wildlife and fisheries.<sup>387</sup> Another commenter urged BOEM to coordinate planning with the Department of Energy while also facilitating preconstruction surveys.<sup>388</sup> A commenter supported the PEIS as a way to discuss cumulative impacts and facilitate captains', anglers', and other stakeholders' input.<sup>389</sup>

Another commenter stated that the programmatic approach could improve the efficiency of the permitting process while programmatic AMMM measures could make impacts more predictable.<sup>390</sup> A commenter stated that PEIS can help mitigate environmental impacts by improving project citing. The commenter supported using a PEIS overall but stated that specific COPs should be assessed by a full EIS rather than an environmental assessment.<sup>391</sup>

#### O.8.6.2 Criticism of the Programmatic Approach

Conversely, a commenter opposed the PEIS approach as “bifurcating” reviews and threatening historic properties. The commenter stated that a better approach would “take into account all the interrelated historical, cultural, scientific and economic impacts and threats” associated with NY Bight wind power development. The commenter added that there have been insufficient pilot projects and scientific review to support NY Bight development. The commenter also stated that BOEM failed to follow its own regulations by issuing a proposed sale notice before an environmental review. The commenter stated that BOEM’s process violates NEPA by providing too little scientific basis for a proposed action.<sup>392</sup> Another commenter stated that impacts, such as impacts on fisheries, should be evaluated on a project-specific level.<sup>393</sup>

Another commenter questioned whether a PEIS is appropriate, stating that a prior EIS for an offshore windfarm minimized impacts on sea turtles as “minor.”<sup>394</sup> Also discussing minor impacts, another commenter hoped that BOEM will be able to identify minor environmental impacts, such as EMFs around transmission cables, at the PEIS stage.<sup>395</sup>

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<sup>386</sup> National Marine Fisheries Services.

<sup>387</sup> NJDEP.

<sup>388</sup> New York State.

<sup>389</sup> American Saltwater Guides Association.

<sup>390</sup> The Nature Conservancy.

<sup>391</sup> National Wildlife Federation et al.

<sup>392</sup> Borough of Seaside Park.

<sup>393</sup> Fisheries Survival Fund.

<sup>394</sup> Clean Ocean Action.

<sup>395</sup> American Clean Power Association.

### O.8.6.3 Other Comments on the Programmatic Approach

A commenter stated that BOEM should disclose all important information relevant to the PEIS and state when information is unavailable or incomplete, providing a citation. The commenter emphasized the importance of accurate, up-to-date information to inform its environmental reviews and its characterization of impacts as minor or major. The commenter recommended that, in situations where the predictive certainty of possible impacts is low, BOEM require monitoring and provide adaptive management recommendations.<sup>396</sup> Another commenter stated that the PEIS should be based on sound science according to “standards for which scientific validation will be used.” The commenter said the PEIS should provide a framework for incorporating new science and “benchmarks” that BOEM would use to assess the project’s impacts.<sup>397</sup>

A commenter recommended that BOEM describe standardized processes and metrics to evaluate deviations from the PEIS.<sup>398</sup> Another commenter requested that the Draft PEIS include an explanation of changes since BOEM efforts to develop a PEIS in 2007. The commenter also requested that the PEIS include a quantified cost-benefit analysis that includes impacts on electric ratepayers.<sup>399</sup>

A commenter stated that the PEIS for the NY Bight should not be applied to other regions as the PEIS will be based on region-specific data.<sup>400</sup>

A commenter stated that they recognize the benefits inherent in a programmatic approach to assessing the common impacts of offshore wind development and measures to mitigate those impacts. However, the commenter appreciated that BOEM has been clear that individual projects may submit a COP in a timeline that best suits their needs.<sup>401</sup>

## O.8.7 Comments on the RPDE (Including Cable Routes, Landfalls, etc.)

Approximately 17 commenters provided comments on the RPDE.

### O.8.7.1 Need for Flexibility in RPDE Analysis or Design Parameters

A commenter expressed concern with respect to the RPDE, stating that developers are likely to change the scope of their COPs after the PEIS is finalized and that it could be difficult to adjust environmental reviews to these changes while adhering to project timelines. The commenter provided an example of this from the Vineyard Wind offshore wind project.<sup>402</sup>

A commenter urged BOEM to examine a variety of representative models using different technologies, and, in particular, models using “quiet technology fixed-foundations” and floating wind technology. The

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<sup>396</sup> National Wildlife Federation et al.

<sup>397</sup> Clean Ocean Action.

<sup>398</sup> New York State.

<sup>399</sup> J. Binder.

<sup>400</sup> American Clean Power Association.

<sup>401</sup> Attentive Energy LLC.

<sup>402</sup> Seafreeze Shoreside, Seafreeze Ltd.

commenter recommended that BOEM’s analysis consider impacts on waves based on differing foundations, providing citations. The commenter stated that quiet technologies may cause less harm to marine mammals and thus expedite MMPA reviews.<sup>403</sup> Another commenter agreed that the RPDE should evaluate several representative projects and consider technologies to avoid and minimize environmental impacts. The commenter provided a list of its own priorities in RPDE design, including evaluating gravity-based and suction bucket alternatives, using vibro pile versus impact piling, and factors relevant to scour protection and timing of activities.<sup>404</sup> Another commenter also provided numerous recommendations for project planning, siting, and design to minimize environmental impacts.<sup>405</sup>

Other commenters stated that, because the PEIS process may take years and offshore wind technology is advancing, the RPDE should not prescribe the use of certain technologies<sup>406</sup> or should anticipate the development of technological advances.<sup>407</sup> A few commenters said that BOEM should design its RPDE around a set of principles and outcomes rather than means of achieving those outcomes.<sup>408</sup> One of the commenters said that, in addition to technology, the RPDE should not specify project layout or siting within the lease area.<sup>409</sup> Another commenter said that, under a “maximum-case scenario,” specifying project parameters such as foundation type does not assist project design. The commenter recommended that project parameters should instead focus on environmental impacts.<sup>410</sup> A commenter provided citations to recent redesigns in the Vineyard Wind project, arguing that these indicate that even an RPDE designed to accommodate changing wind turbine technologies may be unable to anticipate changing developer preferences over 2 years.<sup>411</sup> A couple of other commenters stated that BOEM should consult with turbine manufacturers and other equipment providers to develop the RPDE.<sup>412</sup> One of the commenters stated that, once BOEM has done so and produced an RPDE, it should present the RPDE to leaseholders for comment.<sup>413</sup> A comment stated that it is difficult for developers to provide locations for landing sites and onshore facilities at the PEIS stage because these decisions rely on State permitting. The commenter recommended that BOEM assess categories of landing sites and onshore facilities, arguing that such an approach is appropriate under OCSLA and would allow evaluation of various impact-producing factors.<sup>414</sup>

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<sup>403</sup> National Wildlife Federation et al.

<sup>404</sup> The Nature Conservancy.

<sup>405</sup> National Marine Fisheries Services.

<sup>406</sup> Vineyard Offshore LLC, American Clean Power Association, Atlantic Shores Offshore Wind, LLC, New York Offshore Wind Alliance.

<sup>407</sup> New England and Mid-Atlantic Fishery Management Councils, Community Offshore Wind.

<sup>408</sup> American Clean Power Association, New York Offshore Wind Alliance.

<sup>409</sup> Atlantic Shores Offshore Wind, LLC.

<sup>410</sup> Invenergy Wind Offshore LLC.

<sup>411</sup> Seafreeze Shoreside, Seafreeze Ltd.

<sup>412</sup> Community Offshore Wind, OW Ocean Winds East, LLC.

<sup>413</sup> OW Ocean Winds East, LLC.

<sup>414</sup> Attentive Energy LLC.

A commenter said that BOEM should base its RPDE on public information for similar projects and should consult with DOE on the reasonably foreseeable limits of technical and economic feasibility.<sup>415</sup> Another commenter agreed that BOEM should rely on information from other projects to characterize “minor” impacts or to inform analysis.<sup>416</sup> With respect to economic feasibility, a commenter also recommended that BOEM consider supply chain issues and tax credit availability under the Inflation Reduction Act in its RPDE.<sup>417</sup>

#### O.8.7.2 Power Transmission

Several commenters addressed wind power transmission. One urged BOEM to consider a backbone transmission effort and comparative cable corridor development impacts as part of the PEIS.<sup>418</sup> A commenter stated that BOEM should consider Wind Turbine Generator (WTG) layout and spacing to accommodate fishing and transit needs. The commenter stated that the layout should maximize efficiency for cable layouts to serve neighboring projects—such as Ocean Wind and Atlantic Shores—and minimize turbulent flow and wake effects.<sup>419</sup> Another commenter agreed that BOEM should consider backbone transmission designs and coordinating power transmission among multiple projects.<sup>420</sup>

Another commenter stated that BOEM should require the use of jet plows to bury inter-array cables, providing citations and stating that this method causes the fewest adverse environmental impacts. The commenter added that BOEM should consider implementing seasonal restrictions on cable burial to protect wildlife. Additionally, the commenter stated that BOEM should take into account how cable burial increases turbidity and how developers can minimize these impacts. Finally, the commenter asserted that open loop cooling systems for direct current transmission would not be appropriate in the NY Bight, citing the impacts of such systems from another EIS.<sup>421</sup>

Another commenter recommended that BOEM, as ways to minimize mobilization of the seabed from burying cables, consider requiring that developers:

- Include a robust siting analysis to avoid dynamic areas with known high seabed mobility.
- Include mariner notifications of shallow-buried and exposed cables and cable protection measures.
- Include methods to monitor and maintain target burial depth for the maximum possible distance and expeditiously repair/rebury cable(s).
- Evaluate adaptive management if repeated cable exposures occur.

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<sup>415</sup> Invenergy Wind Offshore LLC.

<sup>416</sup> T. Barten.

<sup>417</sup> American Clean Power Association.

<sup>418</sup> National Wildlife Federation et al.

<sup>419</sup> EPA.

<sup>420</sup> New England and Mid-Atlantic Fishery Management Councils.

<sup>421</sup> National Wildlife Federation et al.

With respect to submarine cable system burial and risk assessment, the commenter recommended that BOEM:

- Include draft assessment in the COP and BOEM’s COP-specific NEPA analysis.
- Evaluate existing and emerging cable installation techniques to achieve target burial depth for the maximum possible distance.
- Evaluate secondary cable protection measures and include how impacts have been avoided and minimized to the greatest extent possible.<sup>422</sup>

Another commenter recommended that, with respect to power transmission RPDE concerns, BOEM consider:

- Potential incorporation of meshed or shared offshore transmission.
- Closed vs open-loop cooling of offshore AC/DC conversion stations.
- Operational noise profiles among alternative turbine options.
- Cable route options (particularly focusing on conflict avoidance and improved energy delivery opportunities).<sup>423</sup>

Another commenter recommended that BOEM require submission of as-built surveys to identify cable protection areas and extant cables in a project area.<sup>424</sup>

## **O.8.8 Comments on the Proposed Tiered Review Process**

Six commenters provided comments on the proposed tiered review process.

A commenter supported a tiered review process for NY Bight development and expressed optimism that leaseholders, regulators, and stakeholders can collaborate for an efficient environmental review process.<sup>425</sup> A commenter also supported the approach and recommended that BOEM provide sufficient detail in the PEIS to “support impact assessment at a landscape level” and prevent the duplication of analyses at the COP level.<sup>426</sup> Another commenter supported the tiered approach, stating that the approach should avoid the repeated discussion of similar issues for multiple projects. The commenter added that the tiered approach should facilitate the adoption of programmatic AMMM measures where appropriate while preserving flexibility for AMMM measures to address site-specific needs.<sup>427</sup>

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<sup>422</sup> New York State.

<sup>423</sup> The Nature Conservancy.

<sup>424</sup> New York State.

<sup>425</sup> Vineyard Offshore LLC.

<sup>426</sup> Atlantic Shores Offshore Wind, LLC.

<sup>427</sup> New York Offshore Wind Alliance.

A commenter expressed concern that, if the PEIS is implemented, there will not be enough time to conduct thorough environmental analyses for specific COPs.<sup>428</sup>

A commenter wrote that adopting a tiered approach for windfarm development artificially bifurcates environmental review and prevents effective analysis of cumulative impacts.<sup>429</sup> Several commenters stated that more detail as to the tiered review process is needed.<sup>430</sup> The commenters asked, in particular, how “minor” environmental impacts will be handled at the project-specific tier of review.<sup>431</sup> Another stated that pre-approving AMMM measures has not previously been done in BOEM offshore wind leasing.<sup>432</sup>

### **O.8.9 Other Comments**

Eight commenters provided other general comments on the PEIS, including comments specific to a lease area.

A commenter asserted that areas already leased at auction should be considered for the PEIS, not only those within NY Bight.<sup>433</sup> Another commenter added that the New Jersey lease area should be included in the scope of the PEIS.<sup>434</sup>

A commenter stated that BOEM should consider how recent commitments from New York and New Jersey to wind energy development demonstrate support for a local supply chain and how stakeholder engagement requirements affect the development of AMMM measures.<sup>435</sup>

A commenter wrote in support of green construction methods, including recycling materials and using energy-efficient technologies.<sup>436</sup>

A commenter stated that offshore wind development will be vital to meeting clean energy goals in the Northeast and mid-Atlantic, stating that it is currently impracticable to transmit energy from the “wind-belt” states.<sup>437</sup>

A commenter stated that it has performed research relevant to NY Bight development, providing citations. The commenter wrote that BOEM should reach out to its studies’ authors to integrate their findings into BOEM’s analyses.<sup>438</sup>

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<sup>428</sup> Seafreeze Shoreside, Seafreeze Ltd.

<sup>429</sup> Clean Ocean Action.

<sup>430</sup> Clean Ocean Action, Seafreeze Shoreside, Seafreeze Ltd.

<sup>431</sup> Clean Ocean Action, Seafreeze Shoreside, Seafreeze Ltd.

<sup>432</sup> Seafreeze Shoreside, Seafreeze Ltd.

<sup>433</sup> Long Island Commercial Fishing Association.

<sup>434</sup> Save Long Beach Island, Inc.

<sup>435</sup> Invenergy Wind Offshore LLC.

<sup>436</sup> EPA.

<sup>437</sup> T. Barten.

<sup>438</sup> Responsible Offshore Development Alliance.

A commenter listed lease blocks that fall into buffer zones identified by the Mid-Atlantic Marine Portal and cited a visual depiction to that end.<sup>439</sup>

A commenter asserted that, because leaseholders will develop COPs in parallel with the PEIS process, BOEM must coordinate with leaseholders up to the September 2023 Draft EIS to minimize delays.<sup>440</sup>

## O.9 Out of Scope

A commenter provided comments on BOEM’s “Process for Identifying Alternatives for Environmental Reviews of Offshore Wind COPs pursuant to the National Environmental Policy Act (NEPA),” stating that this document was never open for public comment and inaccurately reflects BOEM processes.<sup>441</sup>

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<sup>439</sup> World Shipping Council.

<sup>440</sup> OW Ocean Winds East, LLC.

<sup>441</sup> Seafreeze Shoreside, Seafreeze Ltd.