



# FACTS AND ISSUES FOR CONSIDERATION IN SUBMITTING PUBLIC COMMENTS ON THE “DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT (PEIS) FOR EXPECTED OFFSHORE WIND DEVELOPMENT IN THE NEW YORK BIGHT”

*Prepared by Clean Ocean Action, February 2024*

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The federal Bureau of Ocean Energy Management (BOEM) released a **1,429-page Programmatic Environmental Impact Statement (PEIS)** that presents impacts of offshore wind energy expected in six large leases, approximately **488,000 acres** of ocean, in the New York / New Jersey Bight. The public only has 45 days—from 1/12/24 to 2/26/24—to review this monstrous document for offshore & onshore impacts. Take action today to share your comments! Consider using the following Talking Points in comment to BOEM. For additional updates, factsheets, and resources, go to [CleanOceanAction.org](https://www.boem.gov/renewable-energy/state-activities/new-york-bight). For the BOEM PEIS, go to <https://www.boem.gov/renewable-energy/state-activities/new-york-bight>.

These six lease areas for proposed offshore wind energy projects are in addition to the three areas already leased with proposed and approved projects directly off the New Jersey coast, namely:

- Ocean Wind 1/2: Project 1 – 75,526 acres, 98 turbines, 3 offshore substations, 384 miles of offshore cables; Project 2 – 84,955 acres, 82 turbines, and additional offshore substations and cables
- Atlantic Shore South: 183,353 acres, 231 turbines, up to 10 offshore substations, over 1,025 miles of offshore cables
- Empire Wind 1/2: 79,350 acres, 147 turbines, 2 offshore substations, 327 miles of offshore cable

In addition, there are more offshore wind projects under construction or proposed to the north and south. According to the National Marine Fisheries Service (NMFS), “by 2030 the Northeast large marine ecosystem will be occupied by over 2.4 million acres of leases, 3,400 turbines, and 10,000 miles of submarine cables; and an additional 5.7 million acres is also under consideration for further development” for offshore wind energy.

## **NY Bight PEIS Details: Turbines, Offshore Substations, & Cables (see page ES-7-8):**

According to the PEIS, “for the analysis of six NY Bight projects, BOEM anticipates development of 1,103 wind turbine generators (WTGs), 22 offshore substations (OSSs), 44 offshore export cables totaling 1,772 miles (2,852 kilometers), and 1,582 miles (2,546 kilometers) of interarray cables across the six NY Bight lease areas.” (PEIS, page ES-7)

The following information (from the Draft PEIS Executive Summary) describes the total numbers of turbines, offshore substations, and cables expected with the development of the total six lease areas:

### ***Turbines:***

- Number of offshore wind turbines – up to a total of **1,680 turbines (10-15 MW)**
- Spaced **0.6** nautical miles apart.
- Rotor diameter – **721 to 1,214 feet** (a football field is 360 feet from endzone to endzone)
- Turbine height – **853 to 1,312 feet** (height of the Chrysler Building in NYC is 1,046 feet!)
- Blade length - 12 MW Blades are 301 feet (the Statue of Liberty is 305 feet in height)
- Foundation type: Monopiles or piled jackets, other options

*For additional updates, factsheets, and resources, go to [CleanOceanAction.org](https://www.boem.gov/renewable-energy/state-activities/new-york-bight).*

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- Ocean floor footprint – 0.24 acre **per** monopile foundation and 2.88 acres **per** jacket foundation (total turbine footprint for 1,680 turbines is 403.2 acres and 4,838.4 acres, respectively)

### ***Offshore Substations:***

- Up to **30** high voltage alternating current (HVAC) offshore substations and high voltage direct current (HVDC) converters
- Monopile or piled jacket offshore substation foundation types
- Ocean floor footprint of offshore substations: 0.51 acres **per** monopile and 8.05 acres **per** jacket foundation (total offshore substation footprint for 1,680 turbines is 81.6 acres and 13,524 acres, respectively)
- Will use once-through cooling systems, which are prohibited on land, that will suck-up millions of gallons of ocean water per day for cooling use and discharge warm water filled with biocides into the ocean

### ***Cables:***

- Interarray Cables
  - Total length: up to 3,300 miles for all six project areas (up to 550 per project area)
  - Cable diameter: up to 12 inches
  - Seabed disturbance: 786 feet for all six project areas (up to 131 feet per project area)
  - Burial depth: 3 to 9.8 feet deep
- High voltage export cables (HVDC = High Voltage Direct Current, HVAC – High Voltage Alternating Current)
  - Up to 9 High voltage export cables
  - Cable length: 5,574 miles (up to 929 miles per project area)
  - Cable voltage: up to 420 kilovolt HVAC, up to 525 kilovolt HVDC
  - Cable diameter: up to 13.9 inches HVAC, up to 16 inches HVDC
  - Ocean floor disturbance: 1,179 feet for 9 cables
  - Burial depth: 3 to 19.6 feet

## **CONCERNS WITH THE DRAFT NY BIGHT PEIS & OFFSHORE WIND**

### **Public Engagement, Good Governance, Transparency**

- Request an extension to the public comment period of at least 90 days!
- Public given only 45 days to review and provide comments on the Draft PEIS
- PEIS has 1420+ pages with approximately 100 references, 15 Appendices, nearly 180 tables, nearly 85 figures, and over 160 acronyms and abbreviations
- BOEM did not provide a traditional, in-person public comment forum in affected communities
- Recordings from virtual public meetings held by BOEM (1/31/2024 and 2/13/2024) not posted for reference and review for public to provide informed comments
- Lease areas presented as New York Bight, but most lease areas are closer to New Jersey

## **Policy – Clean Ocean Action’s Calls for Action**

- Offshore wind projects and lease sales should be paused until:
  1. the forthcoming Government Accountability Office (“GAO”) study on offshore wind development in the North Atlantic Planning Area is publicly released, and federal, state, and local officials and agencies have an opportunity to review the report, publish a response, and implement recommendations, and
  2. there is a comprehensive offshore wind pilot project in the New York Bight to assess the actual (rather than aspirational and speculative) economic and environmental impacts of pre-construction, construction, operation and maintenance, and decommissioning activities, with independent oversight, and
  3. an independent, transparent investigation into marine mammal deaths off the New Jersey and New York coasts since December 2022 concludes with substantial evidence that offshore wind development is not a significant cause.
- Federal and state agencies and officials are fast-tracking the process to develop the ocean for offshore wind energy. Rushed and uninformed development puts marine life at risk and is rife with possible unintended consequences.
- Policy is out-pacing available science
- 32 offshore wind projects in the North Atlantic, with more to the north and south = too much, too fast!

## **Officials on Offshore Wind Energy Development**

- “When we don’t think through the science, we often get ourselves in trouble.” - National Marine Fisheries Service (NMFS) scientist Andrew Lipsky
- “It’s frustrating that there aren’t clear requirements to avoid an impact to these habitats,” National Marine Fisheries Service regional office. “There isn’t much we have the ability to do.”
- BOEM approved projects despite repeated warnings from the National Marine Fisheries Service about damage to the environment and the fishing industry.
- “We’re building the ship while sailing it.” National Marine Fisheries Service (NMFS)
- “We’re building the plane while flying it.” - NJ State Environmental Official
- “We’re learning as we go.” – New Jersey Department of Environmental Protection official

## **Lack of Science**

- Lack of baseline data, overall, from offshore wind development in this region
- There is growing interest and evidence of how ocean sediments and marine mammals are useful to sequester carbon. However, this has not been studied or assessed thoroughly yet and this proposed massive industrialization will cause more harm.
- Electromagnetic fields (EMF) effects haven’t been scaled
- Unknown impacts of pile driving on marine mammals, specifically baleen whales
- Lack of research regarding responses of large whale species to extensive networks of new structures (e.g., avoidance)
- Electromagnetic field impacts not understood for sea turtles

## Mitigation

- Who will be monitoring and enforcing mitigation measures?
- Not all mitigation measures are effective for all species
- How can mitigation measures be implemented if data is not available to show what the impacts are?

## Impacts on Marine Life

- The ocean off New Jersey and New York is like no other with
  - 33 species of whales and dolphins, including endangered species,
  - 5 species of endangered sea turtles,
  - hundreds of species of fish and shore birds
  - thousands of other marine animals such as invertebrates, all of which help sustain life on earth.
- Noise impacts from pre-construction, construction, operations and maintenance and decommissioning will impact marine mammals and other marine life for entire life cycle of the projects in the six lease areas
- Potential & unknown impacts include noise, electromagnetic fields, navigational safety, changes to benthic and pelagic habitats, behavioral changes in wildlife, alterations to food webs, invasive species concerns, and pollution from increased vessel traffic, heat, and onshore and offshore infrastructure.
- Open-loop (once-through) cooling system is the most common, implies it will be used
- cumulative impacts to benthic communities are “negligible to major”--the entire spectrum of possible impact levels
- Major adverse impacts to NOAA’s research surveys
- Marine mammals: because of unknown info in appendix E, injury/death could still occur; displacement from NY Bight lease areas
- **Sea turtles:** because of unknown info in appendix E, injury/death could still occur; displacement from NY Bight lease areas
- **North Atlantic right whale:** less than 340 NARWs left with \_\_\_ females of breeding age, and each of the six projects will seek authorization to harass marine mammals during preconstruction surveys and construction, operations and maintenance, and decommissioning, in addition to the dozens of other offshore wind projects’ marine mammal harassment authorizations many during the same time; a federal scientist states that no more than one NARW can be lost to affect this critically endangered species of whale

## Impacts on Fisheries

- Fish kills from pile driving
- Sound wave impact, which can be felt underwater from as far as 50 miles away can disrupt fish ability to feed or spawn or migrate
- Intense sound pressure waves “may result in injury or mortality caused by rupturing swim bladders or by internal hemorrhaging.”
- Habitat impacts on ocean floor from foundations and monopiles
- Electromagnetic fields
- BOEM states not expecting irreversible impacts on commercial fisheries, but lost revenue could occur on individual level

## **Pollution Concerns**

- Oil and fluids per turbine
- Resources needed for one offshore wind turbine: Concrete, Steel – 120 to 180 tons, Rare Earth Elements, Iron, Fiberglass, Polymers, Aluminum, Copper (one wind turbine uses 4 mt of copper), not including cables, Zinc, Lithium, SF6 (most potent Greenhouse Gas), 29,000 gallons of fluids per turbine
- Turbine blade recycling issues
- Oil and chemical spills due to vessel traffic, navigation issues related to radar interference with offshore wind projects
- Greenhouse gas emissions of building ships, turbines, infrastructure
- Use of rare earth metals

## **Efficiency**

- Offshore wind turbines are 55% efficient, and lose 4.5% efficiency each year
- Lifecycle of 20 years

## **Environmental Justice**

- lost income/employment in marine industries during operations and maintenance
- facilities built in environmental justice communities
- no assurance that fossil fuel facilities will go offline or closed in environmental justice communities

## **On-land Impacts**

- Onshore impacts unknown
- Need to build ships, ports, construction and operations/maintenance facilities, onshore substations
- Land use/coastal infrastructure: irreversible because onshore facilities may not be decommissioned, irretrievable long term land use

## **Climate Action Now: No time to waste!**

- BOEM stated in Vineyard Wind FEIS: “Overall, it is anticipated that there would be no collective impact on global warming as a result of offshore wind projects, including the Proposed Action alone, though they may beneficially contribute to a broader combination of actions to reduce future impacts from climate change.”
- Human use of fossil fuels is causing accelerated climate change, which is threatening all life on Earth.
- There is no evidence that fossil fuel energy sources will close or cease when offshore wind facilities come online.
- Projected carbon dioxide emissions are still expected to rise despite the growth of renewable energy.
- The ocean has buffered climate impacts, absorbing 90% of the heat generated and up to 30% of the carbon dioxide emissions caused by human activities, but to her own demise with sea-level rise and ocean acidification.
- A healthy ocean with minimal industrialization is key to helping reduce impacts from climate change.
- It will take more than a decade to install and build offshore wind projects, depending on conditions.
- The U.S. leads the world in wasting energy, wasting nearly 60% of the energy generated; *onshore* energy conservation, efficiency, and reasonable and responsible renewable energy must be prioritized.
- While better than impacts from fossil fuel energy sources, impacts from offshore wind are not negligible.

- Solutions to address climate change must not adversely impact the resources that need to be protected.

## Risks & Hazards

- National Academies of Sciences, Engineering and Medicine in 2022 reports impacts on radar systems
- Navigational hazards
  - Increased vessel trips for pre-construction, construction, operation and maintenance, and decommissioning
  - Projects located in between shipping lanes
  - Oil and chemical spill response plans should be required
  - Search and rescue complications
- Hurricanes: considered non-routine event in PEIS
  - Recognize return rates may become more frequent due to climate change,
  - relies on engineering standards to withstand 50-year and 500-year (cat. 5) return interval event
  - NOAA Considering adding Category 6 level Hurricane
- Proposed lease area is in close proximity to one of the busiest shipping corridors - with US Coast Guard and organizations such as the World Shipping Council highlighting serious concerns.

## Preferred Alternatives

- No Action Alternative
- There are cheaper, faster, and safer energy-wise solutions that can be implemented now on land, while a pilot study determines how to conduct offshore wind in an environmentally responsible manner.
- Energy waste reduction
- Energy efficiency
- Energy conservation

**PEIS Lease Areas Credit:  
BOEM, 2024**

