

## Response to Comments and Explanation of Changes from the New Jersey Proposed Sale Notice to the Final Sale Notice

BOEM received 24 comment submissions in response to the *Proposed Sale Notice for Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) Offshore New Jersey* (PSN) comment period that closed September 19, 2014. The submissions addressed many aspects of this lease sale, and this document was prepared in response to several of the key comments and questions. BOEM's responses to the comments are organized into six categories: (1) Auction Procedures, (2) Fiscal Terms, (3) BOEM's leasing procedures, (4) Lease Areas (LAs), (5) and Conditions on Development.

### 1. Comments Related to Auction Procedures

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**Comment:** BOEM should delineate the WEA into four or three lease areas, instead of the two that have been proposed.

BOEM has retained the LAs proposed in the Proposed Sale Notice. BOEM believes the two leasing area scenario provides the most optimal opportunity for each lease area to be of sufficient size to pass the "net benefits test" under the Offshore Wind Economic Development Act (OWEDA) and thus be eligible to receive an Offshore Wind Renewable Energy Certificate (OREC), a type of offtake mechanism considered essential to financing an offshore wind project. Any project application that fails to meet the "net benefits test" is not eligible to receive an OREC award from the New Jersey Board of Public Utilities (BPU). It is BOEM's understanding that one of the primary factors affecting the net benefits determination will be whether a project is of sufficient size to bring manufacturing, and thus jobs, to New Jersey. Based on input from the State and informed by feedback from the offshore wind development community, BOEM understands that an offshore wind project of at least 1,000-1,100 MW would be needed to entice a turbine manufacturer or foundation supplier to set up manufacturing in New Jersey. Based on analysis of wind capacities by NREL and Rutgers University, BOEM believes a two lease scenario is consistent with the goal of providing lease areas large enough to potentially satisfy the "net benefits test".

While a three leasing area scenario could have provided the necessary area size to meet the "net benefits" test, according to NREL's analysis, it could only have done so if each lease area was fully built out with no further limitations resulting from survey results or conflicts with multiple uses that may later be identified. Given the New Jersey WEA's proximity to shore, the existing tug and barge route along the New Jersey coast, and use of the area as a fishery, further development limitations in the proposed New Jersey lease areas are likely.

A four leasing area scenario was also considered, as any bidder winning two zones could obtain sufficient land rights to meet the "net benefits" test for an OREC reward. Depending on the number of bidders and the value placed on different leasing areas, however, it could prove challenging to win two leasing areas in the sale.

***Comment:* BOEM should limit the number of lease areas a bidder can win.**

Several commenters, all from industry, requested that BOEM not allow one bidder to acquire all the lease areas. BOEM has chosen to limit the number of leasing areas an individual bidder can win in the lease sale to one leasing area. Given the pace of development of existing leases and the scale of offshore wind projects currently in Europe, BOEM believes it is unlikely that any one developer would desire or realistically be able to exploit both lease areas, which together are capable of supporting 2,500 – 3,400 MW of generating capacity.

## **2. Comments Related to Fiscal Terms**

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***Comment:* BOEM should reduce the operating fee rate to below 2% and retroactively change all previous leases to the same lower operating fee rate.**

Pursuant to the OCSLA, BOEM must ensure that the government receives a fair return for leases and grants issued on the OCS. BOEM has determined that a 2% operating fee rate throughout the term of the lease allows the government to collect a fair return and is in accordance with the default operating fee specified in 30 CFR 585.506. Pursuant to 30 CFR 585.510, the BOEM Director may reduce the operating fee, or waive the operating fee for up to six years, if BOEM determines, or the lessee can demonstrate, that continued activities would be uneconomic without the requested reduction or waiver, or a reduction or waiver is necessary to encourage additional activities.

***Comment:* BOEM should consider reducing the annual rent of the commercial leases to less than \$3/acre/year.**

Several commenters requested that BOEM consider reducing the annual rent of the commercial leases to less than \$3/acre/year. Overall, the commenters argue that reducing the lease payments is in the best interest of the government because the likelihood of development will increase and the cost to ratepayers will decrease. BOEM has determined that an annual rent amount of \$3/acre/year is appropriate for ensuring a fair return under OCSLA and is in accordance with the default rent specified in 30 CFR 585.503. According to 30 CFR 585.510, the BOEM Director may reduce or waive the rent if BOEM determines, or the lessee can demonstrate to BOEM's satisfaction, that continued activities would be uneconomic without the requested reduction or waiver, or a reduction or waiver is necessary to encourage additional activities.

## **3. Comments on BOEM's Leasing Process**

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***Comment:* BOEM should postpone the New Jersey lease sale until the New Jersey Offshore Renewable Energy Certificate Program (OREC) has been concluded and ORECs awarded.**

BOEM works closely with coastal states to ensure that state initiatives are incorporated into BOEM's leasing process to the maximum extent practicable. BOEM has chosen not to delay the lease sale, and notes that prior lease sales (one offshore Virginia, one offshore Rhode Island and Massachusetts, and one offshore Massachusetts) were conducted without an OREC being available to bidders. BOEM believes these lease sales drew satisfactory competition.

In the case of the New Jersey OREC program, BOEM has little control over the time table in which ORECs are awarded. As such, if BOEM had decided to delay the sale for this reason, BOEM could have been waiting indefinitely.

***Comment:* BOEM should consider auctioning the New Jersey WEA in phases (i.e., one lease every other year).**

BOEM has worked extensively with the State of New Jersey, other members of the BOEM Renewable Energy Intergovernmental Task Force, and relevant stakeholders when moving forward with the commercial wind energy leasing process offshore New Jersey. BOEM has published planning notices, gathered information about multiple uses and environmental resources, and conducted extensive public outreach that has helped to define the lease areas identified in the PSN.

Given current feedback and response to the upcoming sale, BOEM feels that leasing only one area per year could undermine the competitiveness and development of offshore wind power off New Jersey, due to an inefficient balance of too few lease areas and excess demand. That understanding, in addition to the additional costs associated with holding multiple New Jersey sales, led BOEM to its decision to auction both areas simultaneously.

***Comment:* BOEM should postpone the New Jersey lease sale until the fishing industry has been fully briefed on what rules and stipulations are to be imposed on the wind industry to ensure fishing will be permitted within and around wind facilities.**

BOEM does not intend to impose any restrictions on its lessees relating to the use of the areas as a fishery at this time. BOEM's coordination efforts with the fishing community, including Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission, will continue after lease issuance.

BOEM will encourage lessees to participate in discussions with NMFS, the Mid-Atlantic Fisheries Management Council, and other stakeholders to further characterize fishing activity offshore New Jersey and develop and implement site-specific best management practices as part of the lessee's Construction and Operations Plan (COP). BOEM's review of the COP may result in required mitigation measures to minimize impacts to fishermen using the area.

#### **4. Comments Regarding BOEM's Lease Areas**

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***Comment:* BOEM should remove the following OCS Blocks from the New Jersey WEA to provide a sufficient corridor for two-way tugboat and barge traffic to navigate between the Aids to Navigation (ATONs) (i.e. buoys) to the west and the New Jersey WEA to the east. lease blocks from the NJ WEA: 7081 (aliquots A, B, E), 7080 (aliquots A-K, M, N), 7031 (aliquots I, J, M, N), 7030 (aliquots B-P), 6982 (aliquots I, J, M), 6932 (aliquots A-H), 6931 (aliquots H, K, L, N, O, P), 6883 (aliquots A, B, E, F, I), 6834 (aliquot I), 6833 (aliquots C, D, F-P), 6784 (aliquots K, L, O), 6735 (aliquots C, D, G, K), 6636 (aliquots C, D, G, H), 6488 (aliquots A, B, E, I, M), 6439 (aliquots A, B, E, I), 6438 (aliquots D, G, H, K, L, O), 6389 (aliquots C, D, G, H, K, L, O).**

At this time, BOEM believes that maintaining the current tug and barge setback from the New Jersey Wind Energy Area is appropriate. BOEM has committed to requiring that each commercial wind lessee submit a Navigational Safety Risk Assessment (NSRA) pursuant to USCG's Navigation and Vessel Inspection Circular NO. 02-07 with its COP. The COP will detail the developer's specific commercial wind development proposal, and there will be opportunity for public input during the review of each COP. Each NRSA will be closely reviewed by BOEM and USCG, and BOEM will be looking to USCG for input and analysis on potential impacts to maritime users, including recommendations as to the appropriate size of any additional necessary setback area, prior to approving, approving with modifications, or disapproving any COPs.

***Comment:* Navigation and safety conflicts should be minimized early in the stinging and leasing process to avoid providing a false perception that lease areas are suitable for development when significant navigational and safety conflicts still exist. This is consistent with the DOI's Smart from the Start Initiative. BOEM should resolve all significant navigation and safety issues before proceeding with a lease sale and address navigational safety concerns holistically as changes to a WEA would impact routing in other areas. Without doing so the USCG recommends applying the standard setbacks contained in the United Kingdom's Maritime Guidance MGN-371 which will require the withdraw of certain blocks in the New Jersey Wind Energy Area. Moreover, if all three Mid-Atlantic WEAs were to be fully developed in their current configurations many tug and barge combination will be unable to safely divert further offshore due to the potential of adverse weather and increased sea state conditions. Diverting tugs and barges inshore will result in an unacceptable increase in safety risk due to the increase in complex vessel interactions. Tug and barge traffic would be crossing the entrance to the Delaware Bay in an area with an extremely high density of deep draft vessels entering and exiting the port.**

BOEM takes maritime safety and navigation concerns very seriously, and strives to engage with the maritime community regarding these important issues. BOEM actively seeks USCG participation as early in the planning process as possible, and continue these engagement efforts as BOEM moves forward with leasing and specific plan reviews. The USCG sits on all thirteen of BOEM's Intergovernmental Renewable Energy Task Forces, which were created to inform BOEM's offshore renewable energy authorization processes.

BOEM always strongly considers USCG's positions and the information provided by maritime stakeholders during its planning process, which has resulted in the reduction of a number of our planning areas to accommodate for vessel traffic. For example, BOEM removed over 25,000 acres from the Virginia wind planning area prior to publishing the Call for Information and Nominations, and reduced the area included in the Maryland Request for Interest by approximately half prior to publishing the Maryland Call. In some instances, the potential for conflict cannot be fully resolved during BOEM's planning process. In such cases, BOEM has been and will continue to be especially vigilant when specific plans for development are submitted. BOEM's goal is to ensure that the installation of commercial wind facilities is compatible with navigational safety.

Reductions or limitations to development in the New Jersey LAs will be re-evaluated at the COP stage, once BOEM and USCG have reviewed a Lessee's project-specific Navigational Risk Assessment (NRA).

***Comment:* Areas highlighted for potential concern by other users, if legitimate, should be removed prior to the New Jersey lease sale.**

BOEM developed the areas being proposed for auction with the assistance and input of the BOEM New Jersey Renewable Energy Task Force. Currently available information is insufficient at this time for BOEM to determine that additional areas should be eliminated from consideration for development. BOEM will reassess these OCS blocks at the COP stage, when additional data and analysis is available to determine whether it is necessary to impose limitations on occupancy or subsurface use.

***Comment:* BOEM should site wind development where no current commercial fishing activity occurs.**

BOEM has decided not to remove areas from leasing consideration prior to the sale. BOEM has included language in the FSN making potential bidders aware that BOEM will be gathering additional data to characterize the extent of potential conflicts and possible mitigation measures to minimize impacts. BOEM has completed work with NOAA's National Marine Fisheries Service (NMFS) Northeast Fisheries Science Center to characterize fishing activity in BOEM's wind energy areas. Results for the New Jersey lease areas indicate the potential for economic impacts, particularly to those vessels conducting dredge activities for surf clams and ocean quahog. BOEM will encourage lessees to participate in discussions with NMFS, the Mid-Atlantic Fisheries Management Council, and other stakeholders to further characterize fishing activity offshore NJ and develop site-specific best management practices as part of the lessees plan development. These discussions could result in mitigation measures in key fishing grounds to offset impacts to fishermen using the area.

***Comment:* BOEM should ensure that the appropriate Department of Defense officials and the Federal Aviation Administration are fully involved in the siting, leasing, permitting and construction of the wind facility.**

The Department of Defense (DOD) and the Federal Aviation Administration (FAA) are members of BOEM's New Jersey Renewable Energy Task Force. The areas being offered for lease have been vetted with each agency to determine their suitability for leasing. BOEM will continue to coordinate with the DOD and FAA throughout the leasing, construction, operations and decommissioning plan reviews.

## **5. Comments Related to Lease Terms, Conditions, and Stipulations**

Several commenters, primarily from NGOs, support offshore wind development but request that additional mitigation measures be applied during site characterization and site assessment activities and that these measures be included as part of Addendum C to the New Jersey leases to protect the North Atlantic Right Whale. Topical areas of concern include: 1) Extensions of the 10 knot speed limit for vessels; 2) Additional restrictions and requirements for sub-bottom

profiling; 3) Changes to the exclusion zone and sound source validation requirements for sub-bottom profiling; 4) Monitoring during sub-bottom profiling and; 5) Protected Species Observers (PSOs). Comments and responses have been grouped by topical area below:

**Topical Area: Extensions to the 10 knot speed limit for vessels**

***Comment:* BOEM should consider a 10 knot speed limit restriction be instituted during November 1 – April 30 on all vessels of any length. Alternatively, BOEM should consider 10 knot speed restriction be extended to all year around.**

BOEM requires that all vessels 65 feet in length, or greater, adhere to the vessel speed restrictions during the NMFS designated seasonal management areas for the North Atlantic right whale feeding areas and mid-Atlantic migratory route. In addition, Section 4.1.1.2 of Addendum C in the New Jersey Final Sale Notice requires a 10 knot speed restriction from November 1 through July 31 which extends past the NMFS mid-Atlantic mandatory speed restriction time period (November 1 through April 30) and exceeds the period requested by the Natural Resources Defense Council (NRDC). NOAA determines timeframes for speed restrictions based on when higher densities of right whales are likely to pass through or reside in the area (73 FR 60173).

Further, 4.1.1.2 requires that all vessels follow a 10 knot speed restriction within any NMFS-designated dynamic management areas (DMA). These restrictions are a requirement of NOAA's 2013 Biological Opinion issued to BOEM for Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf in Massachusetts, Rhode Island, New York and New Jersey Wind Energy Areas<sup>1</sup>. Outside of DMAs, this restriction only applies to vessels 65 feet in length or greater, conducting activities in support of a plan (i.e., SAP and/or COP). However, BOEM has extended this restriction to apply throughout the survey area and not only while operating in DMAs or seasonal management areas (SMAs). BOEM has done this in order to reduce the potential of vessel collisions with protected species during activities conducted in support of a plan (i.e., SAP and/or COP). All vessels are required to comply with vessel strike avoidance measures as stipulated in Addendum C, as well as to monitor NOAA's Right Whale Sighting Advisory System. The increased maneuverability of smaller vessels, which are likely comprised of infrequent crew/supply boats, are anticipated to reduce the likelihood of vessel strikes. BOEM believes that these standard operating conditions (Section 4.0 of Addendum C) will provide the necessary protections to endangered species, including the North Atlantic right whale, in the lease areas delineated offshore New Jersey.

**Topical Area: Additional restrictions and requirements for sub-bottom profiling**

***Comment:* BOEM should modify the New Jersey leases to ban all sub-bottom profiling activity from November 23 – March 21.**

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<sup>1</sup> NOAA. 2013. Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf in Massachusetts, Rhode Island, New York and New Jersey Wind Energy Areas. Biological Opinion. NER-2012-9211.

***Comment:* BOEM should modify the New Jersey leases to ban all sub-bottom profiling activity from for the time periods March 22 – April 30 and November 1 – 22.**

***Comment:* BOEM should modify the New Jersey leases to include a provision requiring the preparation of a site specific risk assessment that would be provided to BOEM and NMFS prior to the commencement of any sub-bottom profiling activity. The risk assessment would include: 1) an assessment of the potential for right whale activity during the period of survey; 2) an acoustic assessment of the specific equipment to be used; and 3) a site specific Marine Mammal Harassment Avoidance Plan.**

***Comment:* BOEM should consider modifying the New Jersey leases to prohibit geophysical surveys at night.**

BOEM has not imposed any seasonal restrictions on sub-bottom profiling in the proposed New Jersey leases, nor does BOEM require a separate assessment of the potential for right whale activity during the period of survey or a site specific Marine Mammal Harassment Avoidance Plan. However, Section 4.3.6.2 of Addendum C requires sound source verification to be conducted prior to the commencement of surveys that involve the operation of the electromechanical survey equipment operating below 200 kHz. Acoustic measurements must be sufficient to establish the following: source level (peak at 1 meter) and distance to the 180, 160 and 150 dB re 1uPa RMS isopleths. The lessee must report the field verification results to the lessor in the SAP and COP Survey Plans, unless otherwise authorized by the lessor. In addition, Section 4.3.6.3 of Addendum C requires the lessee to submit a plan for verifying the sound source levels of any electromechanical survey equipment operating at frequencies below 200 kHz to the lessor no later than 45 days prior to the commencement of the field verification activities. The plan must demonstrate how the field verification activities will comply with the requirements of Section 4.3.6.2, mentioned above. Prior to the commencement of the field verification activities, the lessor may require that the lessee modify the plan to address any comments the lessor submits to the lessee in a manner deemed satisfactory to the lessor. BOEM believes that this sound source verification will provide empirical data to ensure that the standard operating conditions, including exclusion zones, are sufficient to reduce any possible impacts to North Atlantic right whales and other protected species.

Pursuant to the National Environmental Policy Act and the Endangered Species Act, BOEM is required to undertake environmental assessments of the possible impacts to protected species by any BOEM-leased activities on the Outer Continental Shelf. In addition, BOEM regulations at 30 CFR Part 585 Subpart F require site specific biological surveys to be undertaken if it is determined that the best available scientific data is insufficient. Compliance with BOEM's standard operating conditions is a lease requirement, and such conditions include vessel strike avoidance procedures, exclusion zone monitoring by protected species observers, ramp-up and shutdown protocols, sound source verification, seasonal vessel speed restrictions beyond SMAs and DMAs, and all vessels associated with the proposed action would be required to monitor NOAA's Right Whale Sighting Advisory System. Taken together, these measures greatly reduce the risk of injuring or harassing marine mammals.

BOEM believes these measures, together with the environmental assessments conducted under NEPA and ESA, constitute a detailed description of the potential occurrence of North Atlantic right whales during the survey period, as well as a valid marine mammal harassment avoidance plan that meets the requirements of the assessment of the potential for right whale activity during the period of survey and the site-specific risk assessment requested by NRDC.

BOEM does not typically allow sub-bottom profiling activities at night, when visual observations are impaired. However, stipulation 4.3.3 of Addendum C, does allow a lessee to request to be allowed to undertake night-time operations by submitting an alternative monitoring plan to BOEM. Upon review of the alternative monitoring plan, BOEM, in consultation with NMFS, will decide whether or not night-time operations will be allowed. Based on its experience reviewing an alternative monitoring plan submitted by US Wind LLC (Company Number 15023) for lease OCS A-0489 and OCS A- 0490), BOEM has modified Section 4.3.3 of Addendum C to now include the following language: “The alternative monitoring plan must demonstrate the effectiveness of the methodology proposed to the lessor’s satisfaction.” This language was added to clarify that the lessee is not only required to provide an alternative monitoring methodology, but also must demonstrate the effectiveness of the methodology proposed.

BOEM believes that these standard operating conditions will provide necessary protections to endangered species, including the North Atlantic right whale, in the proposed lease area offshore of New Jersey. Thus, a complete prohibition on sub-bottom profiling activities during November 23-March 21 is not warranted.

**Topical Area: Changes to the exclusion zone and sound source validation requirements for sub-bottom profiling**

***Comment:* BOEM should require a minimum 500 meter radius exclusion zone be established around sub-bottom profilers. The exclusion zone should be confirmed using sound source validation before sub-bottom profiling begins and the exclusion zone should be enlarged if the 160 dB isopleth extends beyond 500 meters from the sound source. For sound source validation, NRDC requests developers be required to conduct in-field empirical measurements of the distances in the broadside and endfire directions at which broadband received levels (for boomer sources) or received levels at each operating frequency (for chirp sources) below 22 kHz reach 180 and 160 dB re 1  $\mu$ Pa (RMS) for the sub-bottom profiling source that will be employed.**

***Comment:* BOEM should require that site specific acoustic modeling be the sole method of determining the size of the exclusion zone due to variations among sites that can alter the way that sound propagates underwater.**

BOEM currently requires a 200 m default exclusion zone for electromechanical sources based on the best available scientific data, which have been shown to be conservative estimates (BOEM,

2014)<sup>2</sup>, to ensure that protected species are not exposed to Level A harassment, as defined by NMFS. It may not be possible for lessees to effectively monitor out to Level B, as defined by NMFS. For this reason, all lessees are made aware of their obligations under the Marine Mammal Protection Act (MMPA) and, in cases where an incidental harassment authorization is required to comply with the MMPA, the Lessee must provide a copy of such authorization to the Lessor (Addendum C Section 4.4.5).

Boomers and chirp sub-bottom profilers can be defined as omni-directional sound sources and therefore broadside and endfire measurements would not be practical for these sound sources. As noted previously, Section 4.3.6.2 of Addendum C requires sound source verification to be conducted prior to the commencement of surveys that involve the operation of the electromechanical survey equipment operating below 200 kHz. Acoustic measurements must be sufficient to establish the following: source level (peak at 1 meter) and distance to the 180, 160 and 150 dB re 1uPa RMS isopleths. The lessee must report the field verification results to the lessor in the SAP and COP Survey Plans, unless otherwise authorized by the lessor. In addition, Section 4.3.6.3 of Addendum C requires the lessee to submit a plan for verifying the sound source levels of any electromechanical survey equipment operating at frequencies below 200 kHz to the lessor no later than 45 days prior to the commencement of the field verification activities. The plan must demonstrate how the field verification activities will comply with the requirements of Section 4.3.6.2, mentioned above and will be reviewed by BOEM's subject matter experts for accuracy. The lessor may require that the lessee modify the plan to address any comments the lessor submits to the lessee on the contents of the plan in a manner deemed satisfactory to the lessor prior to the commencement of the field verification activities. BOEM believes that this sound source verification will provide empirical data to ensure that the standard operating conditions, including exclusion zones, are sufficient to reduce any possible impacts to North Atlantic right whales and other protected species.

### **Topical Area: Passive Acoustic Monitoring**

***Comment:* BOEM should require the use of passive acoustic monitoring to complement observers both prior to and during geophysical surveys. For species that infrequently surface or for monitoring large areas, passive acoustic monitoring would help guarantee no marine mammals are in the area before sub-bottom profiling surveys begin.**

Both visual and passive acoustic monitoring techniques have strengths and weaknesses, and neither system provide absolute guarantees of detection, primarily due to the varying behavior of various species and technological/logistical limitations (Wright, 2014)<sup>3</sup>. BOEM believes that visual observations currently follow well-established best practice protocols, with observer qualifications reviewed and approved by NMFS. The Bureau of Safety and Environmental

<sup>2</sup> BOEM (Bureau of Ocean Energy Management). 2014. Atlantic OCS Proposed Geological and Geophysical Activities, Mid-Atlantic and South Atlantic Planning Areas, Final Programmatic Environmental Impact Statement. Volumes I, II, and III; [http://www.boem.gov/Atlantic-G-G-PEIS/#Final PEIS](http://www.boem.gov/Atlantic-G-G-PEIS/#Final%20PEIS).

<sup>3</sup> Wright, A.J. 2014. Reducing Impacts of Noise from Human Activities on Cetaceans: Knowledge Gap Analysis and Recommendations. WWF Global Arctic Programme, Ottawa, Canada. [http://awsassets.panda.org/downloads/ocean\\_noise\\_report\\_web.pdf](http://awsassets.panda.org/downloads/ocean_noise_report_web.pdf)

Enforcement (BSEE) is currently supporting efforts to formulate standards for passive acoustic monitoring with respect to BSEE/BOEM-related activities in order to ensure effective mitigation protocols. Once these efforts are completed, BOEM will evaluate the findings and consider their potential inclusion in future leases.

### **Topical Area: Protected Species Observers**

***Comment:*** BOEM should require that for sub-bottom profiling occurring from April 22 – November 22 that two dedicated, qualified NMFS-approved observers (1 on/1 off) be located at each sub-bottom profiling site to effectively maintain a steady visual watch during the course of the sub-bottom profiling. If the vessel is of sufficient size to accommodate two additional personnel, four dedicated, qualified NMFS-approved observers (2 on/ 2 off) should be required. Observers employed during these time periods should have at least 1 year of experience as professional marine mammal observer or equivalent academic experience.

Section 4.3.4 of Addendum C requires that the exclusion zone for all sub-bottom profiling activities be monitored by NMFS-approved protected species observers around any operational sound source. Consistent with the recommendations for national standards for a protected species observer and data management program (Baker et al., 2013)<sup>4</sup>, a sufficient number of PSOs are required on board to facilitate effective observer rotations in order to prevent observer fatigue and reduced effectiveness. At pre-survey meetings, BOEM informs lessees of these requirements and has revised Section 4.3.4 of Addendum C to provide greater clarity in this regard. Section 4.3.4 of Addendum C has been revised as follows: “The Lessee must ensure that the exclusion zone for all G&G surveys performed in support of plan submittal is monitored by NMFS-approved protected species observers around the sound source. The number of protected species observers must be sufficient to effectively monitor the exclusion zone at all times. In order to ensure effective monitoring, observers must be on watch for no more than 4 consecutive hours, with at least a 2-hour break after a 4-hour watch, unless otherwise accepted by the Lessor.”

Based on consultation with NMFS, the qualifications of all PSOs are reviewed and approved by NMFS. BOEM believes that the revised stipulation and NMFS’s observer approval process address these requests and provide the necessary protections for North Atlantic right whales and other endangered species.

***Comment:*** Several commenters recommend instituting the International Cable Protection Committee’s (IPC) Recommendation 13, “*The Proximity of Offshore Renewable Wind Energy Installation and Submarine Cable Infrastructure*” and Recommendation 7, “*Procedure to be Followed Whilst Civil Engineering or Offshore Construction Work is Undertaken in the Vicinity of the Active Submarine Cable Systems*” as part of the leasing and

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<sup>4</sup> Baker, K., D. Epperson, G. Gitschlag, H. Goldstein, J. Lewandowski, K. Skrupky, B. Smith, and T. Turk. 2013. National Standards for a Protected Species Observer and Data Management Program: A Model Using Geological and Geophysical Surveys. U.S. Department of Commerce. NOAA Technical Memorandum. NMFS-OPR-49. 73 p

**permitting process. This would require proximity agreements to be established between cable owners and lessees where appropriate.**

BOEM believes it is premature to require agreements between a lessee(s) and cable owner at the leasing stage when few details are known about the potential locations of wind turbines, electric service platforms, or inner array cables. However, BOEM also believes that is prudent to ensure that lessees are made aware about potential conflicts with existing cables and provided with guidance on how those conflicts could be addressed as they develop their COPs.

BOEM is in the process of revising its COP guidelines to include recommendations for engaging and coordinating with owners and operators of existing telecommunications cables. These revisions include recommended steps that a lessee should follow if it obtains a BOEM lease through which a telecommunications cable traverses, and provides references to ICPC documents that lessees are encouraged to use in discussions with telecommunications cable operators. Once they have been finalized, the revised guidelines will be posted on BOEM's website at the following link: <http://www.boem.gov/National-and-Regional-Guidelines-for-Renewable-Energy-Activities/>.

***Comment:* BOEM should consider including a lease stipulation that requires lessees to hire a fisheries liaison to reduce potential multiple use conflicts.**

BOEM's 2007 Record of Decision for the OCS Alternative Energy and Alternate Use Program adopted a series of best management practices (BMPs), one of which states that, "lessees and grantees shall work cooperatively with commercial/recreational fishing entities and interests to ensure that the construction and operation of a project will minimize potential conflicts with commercial and recreational fishing interests." The ROD also provided that BOEM may choose to incorporate one or more of its identified BMPs into its leases as required stipulations.

Between 2012 and 2014, BOEM collaborated with stakeholders in the fishing and offshore wind industries to develop additional BMPs in furtherance of its goal of eliminating/minimizing potential multiple use conflicts. As a result of this effort, BOEM concluded that there would be great merit in a lessee utilizing a fisheries liaison and a fisheries representative during the lessee's plan development process. Therefore, BOEM recommends that lessees utilize a fisheries liaison and fisheries representative during the development of their plans to facilitate cooperation with the fishing industry. However, given the benefits of preserving lessee flexibility and the lack of a project-specific liaison process at this juncture, BOEM is not including a stipulation that requires the use of a fisheries liaison in the leases to be offered in the New Jersey lease sale.

***Comment:* Several commenters request that BOEM monitor the impacts of offshore wind facilities (during all phases of development) to fisheries resources, and establish procedures to mitigate unforeseen impacts that may occur after construction.**

In 2013, BOEM issued [Guidelines for Providing Information on Fisheries for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585](#), which identifies the required information that a developer must submit with its plans. This document includes guidance to developers for:

- Identifying and confirming dominant benthic, demersal, and pelagic species within the project footprint and surrounding areas,
- Establishing a pre-construction baseline that may be used to assess whether detectable changes occurred in fish presence, absence, or abundance post-construction,
- Collecting additional information to reduce uncertainty associated with existing fish data or to help inform the interpretation of survey results,
- Developing an approach to quantify any substantial changes in fish presence, absence, or abundance associated with proposed operations.

BOEM will work with lessees and stakeholders to identify project-specific post-construction environmental monitoring needs.

***Comment:* Cable should be buried deep enough for commercial fishing gear to safely deploy and retrieve commercial fishing nets, scallop dredges, clam dredges and tow over cables.**

Target cable burial depth varies by project due to site specific conditions. A developer will need to understand the existing use of the area to be developed and conduct a navigational and hazard assessment as part of its rationale for the proposed cable route and burial depth. Additional information is available in two BOEM-funded reports: [\*Offshore Electrical Cable Burial for Offshore Wind Farms State of the Art, Standards and Guidance & Acceptable Burial Depths, Separation Distances and Sand Wave Effect \(2011\)\*](#) and [\*Offshore Wind Submarine Cable Spacing Guidance \(2014\)\*](#).

***Comment:* BOEM should enhance communication with the fishing industry.**

BOEM has and will continue to communicate with the fishing industry throughout the term of each lease. BOEM recently completed workshops in the mid-Atlantic and southern New England regarding fishery best management practices and is continuing to work with stakeholders to refine site specific measures regarding communication and current ocean use. BOEM will continue to engage with fishery management organizations including the Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission. See Question/Answers related to fisheries concerns above also.

***Change:* BOEM will allow any authorized signatory of the Lessee to modify or amend a lease with the mutual agreement of the Lessor.**

BOEM has revised Section 20, “Modifications” of the lease form to allow the lease to be modified or amended by mutual agreement between the Lessor and any duly authorization signatory of the Lessee, meaning, any person listed on the Lessee's legal qualifications card. Previously, only the identified Lease Representative could authorize changes for the Lessee.