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Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore New Jersey, Delaware, Maryland and Virginia

Background

Pursuant to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321-4370f, and the Council on Environmental Quality (CEQ) regulations at 40 CFR 1501.3, the U.S. Department of Interior (USDOI), Bureau of Ocean Energy Management (BOEM) has prepared an environmental assessment (EA) to determine whether issuance of leases and approval of site assessment plans within the Wind Energy Areas (WEAs) offshore New Jersey, Delaware, Maryland and Virginia would have a significant effect on the environment and whether an environmental impact statement (EIS) must be prepared.

The Renewable Energy Leasing and Development Process

The Energy Policy Act of 2005, Pub. L. No. 109-58, added subsection 8(p)(1)(C) to the OCS Lands Act (OCSLA), which grants the Secretary of the Interior the authority to issue leases, easements, or rights-of-way on the OCS for the purpose of renewable energy development, including wind energy development. *See* 43 U.S.C. § 1337(p)(1)(C). The Secretary delegated this authority to the former Minerals Management Service (MMS), now BOEM. On April 22, 2009, BOEM promulgated final regulations implementing this authority at 30 CFR Part 585.

Under the renewable energy regulations, the issuance of leases and subsequent approval of wind energy development on the OCS is a staged decision-making process. BOEM's wind energy program occurs in four distinct phases: (1) planning; (2) lease issuance; (3) approval of a site assessment plan (SAP); and, (4) approval of a construction and operation plan (COP).

The first phase is to identify suitable areas for wind energy leasing consideration through collaborative, consultative, and analytical processes.

The second phase is the issuance of a commercial wind energy lease. The competitive lease issuance process is set forth at 30 CFR 585.210 – 585.225, and the noncompetitive process is set forth at 30 CFR 585.230 – 585.232. A commercial lease gives the lessee the exclusive right to subsequently seek BOEM approval for the development of the leasehold. The lease does not grant the lessee the right to construct any facilities; rather, the lease grants the right to use the leased area to develop its plans, which must be approved by BOEM before the lessee can move on to the next stage of the process. *See* 30 CFR 585.600 and 585.601. On September 6, 2011, BOEM published in the *Federal Register* the proposed commercial renewable energy lease form (76 FR 55090).

The third stage of the process is the submission of a SAP, which contains the lessee's detailed proposal for the construction of a meteorological tower and/or the installation of meteorological buoys on the leasehold. *See* 30 CFR 585.605 - 585.618. The lessee's SAP must be approved by BOEM before it conducts these "site assessment" activities on the leasehold. BOEM may approve, approve with modification, or disapprove a lessee's SAP. *See* 30 CFR 585.613.

The fourth stage of the process is the submission of a COP, a detailed plan for the construction and operation of a wind energy project on the lease. *See* 30 CFR 585.620-585.638.

BOEM approval of a COP is a precondition to the construction of any wind energy facility on the OCS. *See* 30 CFR 585.628. As with a SAP, BOEM may approve, approve with modification, or disapprove a lessee's COP. *See* 30 CFR 585.628.

The regulations also require that a lessee provide the results of surveys with its COP, including a shallow hazards survey (30 CFR 585.626 (a)(1)), geological survey (30 CFR 585.616(a)(2)), geotechnical survey (30 CFR 585.626(a)(4)), and an archaeological resource survey (30 CFR 585.626(a)(5)). BOEM refers to these surveys as "site characterization" activities. *See also* http://www.boem.gov/offshore/RenewableEnergy/PDFs/GGARCH4-11-2011.pdf.

In addition to commercial leases, BOEM has the authority to issue leases to other Federal agencies and to States for the purpose of conducting renewable energy research activities that support the future production, transportation, or transmission of renewable energy. *See* 30 CFR 585.238. The terms of these types of research leases would be negotiated by the Director of BOEM and the head of the Federal agency or the Governor of the relevant State, or their authorized representatives, on a case-by-case basis, subject to the provisions of 30 CFR Part 585, including those pertaining to public involvement.

The "Smart From the Start" Atlantic Wind Energy Initiative

On November 23, 2010, Secretary of the Interior Ken Salazar announced the "Smart from the Start" Atlantic wind energy initiative to facilitate the responsible development of wind energy on the Atlantic Outer Continental Shelf (OCS). This initiative calls for the identification of areas of the Atlantic OCS that appear most suitable for commercial wind energy activities, while presenting the fewest apparent environmental and user conflicts. These areas are known as Wind Energy Areas (WEAs). In consultation with other Federal agencies and BOEM's Intergovernmental Renewable Energy Task Forces, BOEM identified WEAs offshore New Jersey, Delaware, Maryland and Virginia. As a result of comments received on the Notice of Intent to Prepare this EA, Requests for Interest, and Calls for Information and Nominations published for these areas in the *Federal Register*, the WEAs have been further refined to arrive at the following areas that were considered for leasing in the EA (*see* Section 1.5 and Figure 1.2 of the EA):

New Jersey WEA: The area offshore New Jersey considered for leasing is approximately 43 whole OCS blocks and 26 partial blocks. The area begins 7 nm from the shore and extends roughly 23 nm seaward (or the approximate 100 ft depth contour) and extends 53 nm along the Federal/state boundary from Seaside Park south to Hereford Inlet. The entire area is approximately 418 square nm (354,408 acres; 143,424 hectares).

Delaware WEA: The area offshore Delaware considered for leasing rests between the incoming and outgoing shipping routes for Delaware Bay, and is made up of 11 whole OCS blocks and 16 partial blocks. The closest point to shore is approximately 11 miles due east from Rehoboth Beach, Delaware. The entire area is approximately 122 square nm (103,323 acres; 41,813 hectares).

Maryland WEA: The area offshore Maryland considered for leasing is defined as 9 whole OCS blocks and 11 partial blocks. The western edge of the WEA is located approximately 10 nm

from the Ocean City, Maryland coast and the eastern edge is approximately 27 nm from the Ocean City, Maryland coast. The entire area is approximately 94 square nm (79,706 acres; 32,256 hectares).

Virginia WEA: The area offshore Virginia considered for leasing consists of 22 whole OCS blocks and 4 partial blocks. The western edge of the area is approximately 18 nm from Virginia Beach, and the eastern edge is approximately 37 nm from Virginia Beach. The entire area is approximately 164 square nm (138,788 acres; 56,165 hectares).

Nature of the Analysis in the EA

BOEM prepared the EA to inform decisions to issue leases in these refined WEAs, and to subsequently approve SAPs on those leases. As discussed above, BOEM does not issue permits for shallow hazards, geological, geotechnical, or archaeological resource surveys. However, since BOEM regulations require that a lessee include the results of these surveys in its application for COP approval, the EA treated the environmental consequences of these surveys as reasonably foreseeable consequences of issuing a lease.

Thus, the EA analyzes the reasonably foreseeable consequences associated with two distinct BOEM actions in the WEAs:

(1) Lease issuance (including reasonably foreseeable consequences associated with shallow hazards, geological, geotechnical, and archaeological resource surveys); and
(2) SAP approval (including reasonably foreseeable consequences associated with the installation and operation of a meteorological tower and/or meteorological buoys).

Additional analysis under NEPA will be required before any future decision is made regarding construction or operation of any wind energy facility on leases that may be issued within the WEAs. BOEM is not currently reviewing any COP, nor has any COP been submitted for the agency's consideration in the aforementioned WEAs. The purpose of conducting surveys and installing meteorological measurement devices is to assess the wind resources in the lease area and to characterize the environmental and socioeconomic resources and conditions so that a lessee can determine whether the site is suitable for commercial development and, if so, submit a COP for BOEM review.

The issuance of a lease does not mean, should a lessee submit a COP in the future, that COP would be approved, or that lease will ultimately be developed at all. Rather, the lease only grants the lessee the exclusive right to use the leasehold to gather resource and site characterization information and develop its plans, and to subsequently seek BOEM approval of its plans for the development of the leasehold (*see* the proposed renewable energy commercial lease form at 76 FR 55090). Should a lessee submit a COP, BOEM would consider its merits, perform the necessary consultations with the appropriate state, federal, local, and tribal entities, solicit input from the public and the appropriate State Task Force(s), and perform an independent site- and project- specific NEPA analysis, before determining whether to approve, approve with modifications, or disapprove a lessee's COP under 30 CFR 585.628.

Therefore, the EA considers whether (1) issuing leases and (2) approving site assessment activities in certain areas of the OCS offshore New Jersey, Delaware, Maryland, and Virginia would lead to reasonably foreseeable significant environmental impacts on the environment, and

thus, whether an Environmental Impact Statement (EIS) should be prepared before leases are issued (*see* 40 CFR 1508.9). As discussed below, BOEM finds that issuing leases and approving site assessment activities within the WEAs would have no significant impact on the environment. As a result, the preparation of an EIS is not necessary for BOEM to proceed with the lease issuance process in some or all of the WEAs.

Should a particular area be leased, and should the lessee subsequently submit a SAP, BOEM would then determine whether this EA adequately considers the environmental consequences of the activities proposed in the lessee's SAP. If BOEM determines that the analysis in this EA adequately considers these consequences, then no further NEPA analysis would be required before the SAP is approved. If, on the other hand, BOEM determines that the analysis in the EA is inadequate for that purpose, BOEM would prepare an additional NEPA analysis before approving the SAP.

If and when a lessee is prepared to propose wind energy generation on its lease, it will submit a COP. If a COP is submitted, BOEM would prepare a separate site- and project-specific NEPA analysis. This may take the form of an EIS and would provide additional opportunities for public involvement pursuant to NEPA and the CEQ regulations at 40 CFR Parts 1500-1508. This NEPA process would provide the public and Federal officials with comprehensive site- and project-specific information regarding the potential environmental impacts of the specific project that the lessee is proposing. BOEM will use a site- and project-specific NEPA document to evaluate the potential environmental and socioeconomic consequences associated with the proposed project when considering whether to approve, approve with modification, or disapprove a lessee's COP pursuant to 30 CFR 585.628.

Environmental and Socioeconomic Consequences of Alternative A (Full Leasing of WEAs)

In the draft version of this EA (published for comment on July 12, 2011 (76 FR 40925)), BOEM identified Alternative A as the proposed action and the preferred alternative. However, on September 26, 2011, BOEM received information from the United States Coast Guard (USCG) indicating that, should lessees attempt to develop commercial-scale renewable energy facilities in certain areas of the WEA offshore Virginia, substantial risks to navigational safety would likely arise. Although BOEM is not currently considering approving any COPs for wind energy generation facilities in any area offshore the Mid-Atlantic States, it would make little sense to give priority to issuing leases in areas that the USCG currently believes would not be suitable for development in the future (*see also* Section 2.3 of the EA). Therefore, and for the same reasons it eliminated USCG "Category A" areas from priority leasing in the Maryland WEA during scoping, BOEM ultimately determined that Alternative A should no longer be the proposed action and the preferred alternative, and instead identified Alternative E as the proposed action and the preferred alternative (*see* Chapter 2 and Section 4.5. of the EA).

Alternative A is the alternative that contemplates the issuance of commercial and research wind energy leases within the maximum area of the WEAs offshore New Jersey, Delaware, Maryland and Virginia (*see* Figure 1.2 of this EA), and approval of site assessment activities on those leases. Alternatives B, C, and E contemplate issuing leases and approving SAPs in smaller areas offshore these states. Alternative D contemplates issuing leases in the same areas as Alternative A, but imposes seasonal restrictions on leasehold activities. Alternative A is generally anticipated to have the greatest environmental consequences of the action alternatives.

As a result, Alternative A is the focus of the environmental analysis in the EA, and is the alternative against which the generally lesser impacts of the other alternatives are compared.

Like the other alternatives, Alternative A presumes the reasonably foreseeable scenarios for leasing, site characterization, and site assessment (*see* Chapter 3 of the EA). Alternative A contemplates leasing the maximum area of each WEA, resulting in 13 total leases. Like the other action alternatives, Alternative A assumes that lessees would conduct the maximum amount of site characterization surveys (i.e., shallow hazards, geological, geotechnical, archaeological and biological surveys) in their leased areas, which, under Alternative A, would constitute the full area of each WEA. Under Alternative A, assuming that all lessees choose to install meteorological facilities, BOEM assumes that up to 12 meteorological towers, 25 meteorological buoys, or some combination would be installed within in the WEAs. These site characterization and assessment activities are projected to result in about 12,000 round-trips by vessels over a five and half year period, which would be divided between 9 major and 28 smaller ports in New Jersey, Delaware, Maryland and Virginia.

Under Alternative A, as well as the other alternatives, BOEM would require lessees to undertake activities on their leases in a particular fashion for the purpose of ensuring that potential impacts to the environment are minimized or eliminated. These requirements will be imposed as stipulations in the lease instrument and/or as conditions of approval of a SAP. Such requirements include the unanticipated finds ("chance finds") requirements described in Section 4.1.3.1.2 of the EA and the mandatory project design criteria detailed in Appendix B of the EA. The reasonably foreseeable impacts of Alternative A (full leasing of the WEAs) on environmental resources and socioeconomic conditions based on the scenario above are described in detail in Section 4.1 of the EA and summarized below:

Air Quality: Due to the low level of WEA-related vessel traffic that will be traversing any of the areas offshore or in the coastal or harbor areas of the Mid-Atlantic states at any one time over the course of five and one-half years of site assessment and characterization activities, and due to the existing air quality in these areas, the amount of human activity that emits air pollutants in these areas, and the short duration of emissions associated with Alternative A, potential impacts to onshore ambient air quality from the Alternative A would be minor, if detectable. Prevailing westerly (west to east flow) winds would prevent any substantial amount of emissions associated with Alternative A activities from making it to onshore areas from the WEAs. Emissions associated with Alternative A within port and harbor areas would be negligible, if detectable, due to the low volume of vessel activity associated with Alternative A, particularly when compared to the high volume of historic, current, and anticipated future activity in and around these areas which emit pollution, and in light of the ambient air quality in most of these areas. A non-routine event such as a diesel spill may have short-term impacts on ambient air quality in a localized area, but these effects would dissipate very quickly. Neither routine activities nor non-routine events associated with Alternative A in harbor areas, coastal waters, or in the WEAs would significantly impact onshore air quality, including the Brigantine Wilderness Area Class I Area.

Water Quality: Impacts to coastal and marine waters from vessel discharges associated with Alternative A should be of short duration and remain minimal, if detectable. Sediment disturbance resulting from anchoring and coring would be short-term, temporarily impacting local turbidity and water clarity. As a result, sediment disturbance resulting from Alternative A is not anticipated to result in any significant impact to any area within the WEAs or along any

potential transmission cable route. Since collisions and allisions occur infrequently and rarely result in a spill, the risk of a spill would be small. In the unlikely event of a fuel spill, minimal impacts would result since the spill would very likely be small, and would dissipate and biodegrade within a short time. As a result, the potential impacts to water quality are not expected to be significant. Storms may disturb surface waters and cause a faster dissipation of diesel if spilled, but impacts to water quality would be negligible and of a short duration. Therefore, impacts from vessel discharges, sediment disturbance, and potential spills associated with Alternative A on harbors, ports, coastal areas, and WEAs would be minor.

Coastal Habitats: Since no expansion of existing onshore facilities is expected to occur as a result of Alternative A, impacts from routine activities would be limited to a negligible increase, if any, to wake induced erosion around the smaller, non-armored, waterways that may be used by project-related vessels. Impacts to coastal habitats from an accidental diesel fuel spill, should one occur, would likely be negligible, localized, and temporary.

Benthic Resources: The primary reasonably foreseeable impacts resulting from routine activities on benthic communities would be direct contact by anchors, driven piles, and scour protection that could cause crushing or smothering. The data collected during HRG surveys would indicate the presence of any potential benthic resources, so that sensitive habitat types, such as hard bottom and live bottom habitats, would be avoided by the lessee during sub-bottom sampling and when meteorological facility siting decisions are made. As a result, Alternative A is not anticipated to result in any significant impact to benthic communities.

Marine Mammals: Alternative A is not anticipated to result in any significant or population-level effects to marine mammals. Under all alternatives, lessees would be required to abide by the mandatory project design criteria detailed in Appendix B of the EA. *See also* discussion of NMFS Concurrence, Section 5.2.1 of the EA. The potential effects to marine mammals are expected to be very localized and temporary resulting in minimal to negligible harassment depending on the specific activity. The impacts are considered minimal due to the impact producing factor itself in certain instances (e.g., most sonar work and grab samples), and/or the limited spatial and/or temporal extent of the activity in other instances (e.g. vessel transits and pile driving activity). Specifically, harassment from sound and slight increases in the risk of vessel collisions are the primary potential impacts to marine mammals associated with Alternative A, but these impacts, if any, are anticipated to be minimal. This conclusion is supported by the NMFS, which agreed that the activities to be conducted are not likely to adversely affect listed whales when implemented according to BOEM's mandatory project design criteria detailed in Appendix B of the EA (USDOC, NOAA, NMFS 2011c).

Sea Turtles: The effects of Alternative A to sea turtles, specifically leatherback, loggerhead, Kemp's ridley, and green sea turtles, are expected to be short term and would result in minimal to negligible harassment. *See* discussion of NMFS Concurrence, Section 5.2.1 of this EA. The impacts are considered minimal due to the nature of the activity itself in some cases, and the spatial-temporal setting in which the activity associated with Alternative A would take place. Harassment from noise, minor loss/displacement from forage areas, and to a lesser degree vessel collisions, are the primary anticipated direct and indirect impacts to ESA-listed sea turtles, but these impacts are anticipated to be minimal. Thus, the consequences to sea turtles are not anticipated to be significant. This conclusion is supported by the NMFS, which agreed that the

activities contemplated under Alternative A are not likely to adversely affect sea turtles when implemented according to BOEM's mandatory project design criteria detailed in Appendix B of the EA (USDOC, NOAA, NMFS, 2011c).

Birds: While birds may be affected by vessel discharges, the presence of meteorological towers and buoys, vessel discharges, and accidental fuel releases, activities and events associated with Alternative A pose no threat of significant impacts to these animals. *See* discussion of USFWS Concurrence, Section 5.2.1 of this EA. The risk of collisions with meteorological towers would be minor due to the small number of towers proposed, their size, and their distance from shore and each other. The impact of meteorological buoys on ESA-listed and non-ESA listed migratory birds (including pelagic species) is similarly expected to be negligible, because buoys are much smaller and closer to the water surface than meteorological towers, and would be similarly dispersed over a wide area.

Bats: While it is rare that bat species would be foraging or migrating through the WEAs, these mammals may on occasion be driven to the project area by prevailing winds and weather. In the event bats are present, impacts would be limited to avoidance or attraction responses. Because of the anticipated distance between the meteorological towers and buoys, there would be no additive effect of constructing all the anticipated meteorological towers or placement of buoys on bats. In fact, the anticipated data collection activities (e.g., biological surveys) may assist in future environmental analyses of impacts of OCS activities on bats. To the extent that there would be any impacts to individuals, the overall impact of Alternative A on bats would be negligible.

Fish and Essential Fish Habitat: Impacts from HRG surveys and meteorological tower construction noise on fish and essential fish habitat would be limited to behavioral reactions such as avoidance of, or flight from, the sound source. Fish that do not flee the immediate action area during pile driving procedure could be exposed to lethal sound pressure levels. However, BOEM's mandatory project design criteria, including the implementation of a "soft start" procedure, will minimize the possibility of exposure to lethal sound levels (*see* Appendix B of the EA). Impacts to fish and their habitat from the discharge of waste materials or the accidental release of fuels are expected to be minor due to the limited number of structures and vessels involved in the reasonably foreseeable leasing and site assessment scenarios. Thus, potential population-level impacts on fish resulting from Alternative A are expected to be negligible.

Archaeological Resources: Offshore New Jersey, Delaware, Maryland and Virginia to the seaward extent of the WEAs, where bottom disturbing activities associated with Alternative A would occur, has the potential to contain historic and pre-contact archaeological resources. The information generated from the lessee's initial site characterization activities, the unanticipated discoveries requirement, and existing regulatory measures would make the potential for seafloor/bottom-disturbing activities (e.g. core samples, anchorages and installation of meteorological towers and buoys) to cause damage or significant impacts to archaeological or historic resources very low. Visual impacts of meteorological facilities and project-associated vessel traffic to onshore cultural resources would be limited and temporary in nature, if noticeable, and consist predominately of vessel traffic which most likely would not be distinguishable from existing vessel traffic.

Recreational Resources: Due to the distance of the proposed lease areas from shore, the fact that no new coastal infrastructure would be necessary, and the small amount of vessel traffic associated with Alternative A that would be present in any given recreational area (particularly given the existing amount of vessel traffic currently traversing these areas), no impacts to coastal recreational resources from routine activities or potential spills are expected. While impacts could occur from marine trash and debris, it is unlikely that any additional trash that could be associated with Alternative A would be perceptible.

Demographics and Employment: Alternative A is expected to have negligible but positive impacts on the population and employment of coastal counties of Virginia, Maryland, Delaware and New Jersey that would provide support services for project-related site assessment and characterization activities.

Environmental Justice: Due to the distance from shore of the proposed lease areas and the use of existing facilities, Alternative A is not expected to have disproportionately high or adverse environmental or health effects on minority or low-income populations.

Land Use and Coastal Infrastructure: Since existing ports or industrial areas are expected to be used, and expansion of these existing facilities is not anticipated to support Alternative A, no significant impact on land use or coastal infrastructure is expected as a result of Alternative A.

Commercial and Recreational Fishing Activities: The increase in vessel traffic, and activities related to the installation/operation of the meteorological towers and buoys would not significantly impact commercial or recreational fishing activities, total catch of fish and shellfish, or navigation over any substantial period of time. Any impacts, such as localized fishing displacement and/or target species availability within the immediate area of anticipated project-related site assessment and characterization activities, would be of short duration, limited area, and temporary, and result in negligible impacts to fishing.

Other Uses of the OCS: The increase in vessel traffic, and activities associated with the installation/operation of the meteorological towers and buoys would not significantly impact current or projected future shipping or navigation. It is unlikely that vessels would collide with meteorological towers or buoys due to USCG requirements relating to marking and lighting of meteorological towers or buoys, the fact that the WEAs were identified and refined to avoid the highest traffic areas, and the fact that the few anticipated structures are small and dispersed over such a wide area of ocean. An oil spill resulting from a collision or allision between a cargo vessel/tanker and a meteorological tower/buoy is not reasonably foreseeable due to the small footprint of these facilities, the fact that they will be lit and marked on navigational charts, their distance from each other and from shore, and the strong likelihood that a meteorological tower would collapse without serious damage to an oil tanker or large ship. In addition, survey activities related to Alternative A require relatively calm seas; therefore, it is unlikely that the vessel activities associated with Alternative A would occur during periods of adverse weather when tug/towboat routes may alter course and move into or close to the New Jersey, Delaware, Maryland and Virginia WEAs.

Cumulative Effects: As discussed throughout Section 4.1 of the EA, the hallmark of the affected environment is one of past, present, and future human activities and anthropogenic impacts over

an extended period of time. The incremental contribution of Alternative A to other past, present, and reasonably foreseeable actions which may also affect the affected environment would be negligible.

Throughout the EA, and in Section 4.7, BOEM considered the cumulative impacts of leasing and site assessment and characterization activities in light of other past, present, and reasonably foreseeable future actions that may also affect the affected environment, including, but not limited to, projected future increases in vessel traffic, future increases in vessel traffic resulting from the anticipated widening of the Panama canal, existing and future onshore development, existing port and waterway usage, other potential future BOEM renewable energy-related activities (e.g., Atlantic Grid Holdings' (AGH) right of way (ROW) grant application for a renewable energy transmission line, New York Power Authority's application for a commercial lease offshore New York, surveying and installing meteorological facilities on existing interim policy leases), an application for constructing a renewable energy test facility in New Jersey State waters, existing buoys and other potential obstructions offshore the Mid-Atlantic states, and existing DoD activities in and around the WEAs.

In summary, since a relatively minor amount of additional vessel traffic (12,000 round trips) would be added to already heavily used and impacted areas, the incremental impacts to coastal habitats and the economy from onshore activities associated with Alternative A would be negligible, if detectable. Offshore, the impacts of this additional vessel traffic generated by Alternative A would likely be undetectable compared to the millions of military, commercial and recreational vessel trips projected to occur during the same five and one-half year period (USDOI, MMS, 2007a).

While there are several meteorological, oceanographic, and navigational buoys installed in vicinity of the WEAs, there are currently no meteorological towers or buoys installed within the New Jersey, Delaware, Maryland and Virginia WEAs. Due to the distance between the anticipated structures and the impacts associated with installing, maintaining, and decommissioning these structures, overlapping or additive impacts are not anticipated to be significant. Since the proposed action would account for nearly all of the meteorological towers and buoys in the WEAs, the cumulative impacts of the installation, operation and decommissioning of meteorological towers and buoys would be primarily a result of approving SAPs in the WEAs and, therefore would likely be negligible to minor on all environmental resources and socioeconomic conditions, as described above. Even in light of the potential impacts associated with other offshore projects, such as AGH's proposed ROW grant, the installation of meteorological facilities on existing Interim Policy leases, New York Power Authority's application for a commercial lease offshore Long Island, and Fishermen's Energy's proposal to construct a renewable energy test project in New Jersey State waters, the cumulative impacts of issuing leases and approving SAPs in the WEAs are not anticipated to be significant.

Environmental and Socioeconomic Consequences of Alternative B (Removal of Anchorage Ground Offshore Delaware)

Under Alternative B, lease issuance and approval of site assessment activities could occur in all areas of the WEAs offshore New Jersey, Delaware, Maryland and Virginia, except for a potential anchorage ground (equivalent to about a half of an OCS block) in the Delaware WEA. Like Alternative A, the reasonably foreseeable impacts of Alternative B would not be significant, though they would differ slightly from those contemplated in alternative A within and around the

Delaware WEA, and coastal areas in Delaware, Maryland, and New Jersey. Compared to the proposed action, the slightly reduced level of survey and construction activities under Alternative B would slightly reduce the impacts on environmental resources, primarily air and water quality, within the vicinity of the Delaware WEA. Under Alternative B, on-lease survey and meteorological tower construction activities that could impact vessel traffic density and patterns would not occur in the anchorage ground. It is assumed that the risk of collisions and allisions would be greater in this area, because it has higher concentrations of vessels. By eliminating the greater risk of collisions allisions in the area, Alternative B would provide a slight reduction in the overall risk of collisions and allisions than would Alternative A. *See* Section 4.2 of the EA.

Environmental and Socioeconomic Consequences of Alternative C (Removal of Category B Areas Offshore Maryland)

Under Alternative C, lease issuance and approval of site assessment activities could occur in all areas of the WEAs offshore New Jersey, Delaware, Maryland and Virginia, except for about 82 percent of the Maryland WEA. Like Alternative A, the reasonably foreseeable impacts of Alternative C would not be significant, though they would differ within and around the Maryland WEA, and coastal areas in Maryland, Delaware, and New Jersey. Compared to Alternative A, the reduced level of survey and meteorological tower construction activities under Alternative C would reduce the impacts on environmental resources within the vicinity of the Maryland WEA, while producing slightly fewer positive impacts on the population and employment of coastal counties of Maryland, Delaware and New Jersey. Under Alternative C, survey and meteorological tower construction activities that could impact vessel traffic density and patterns would not occur in the excluded blocks. Due to the reduced level of vessel traffic and one less meteorological tower anticipated, Alternative C would provide a slightly lower risk of collisions and allisions than would Alternative A. *See* Section 4.3 of the EA.

Environmental and Socioeconomic Consequences of Alternative D (Seasonal Prohibition to protect the North Atlantic Right Whale)

Like Alternative A, under Alternative D, lease issuance and approval of site assessment activities could occur in all the areas of the WEAs offshore New Jersey, Delaware, Maryland and Virginia. However, under Alternative D, high resolution geophysical (HRG) surveys and the installation and decommissioning of meteorological facilities would not be permitted during the peak migration of right whales, which is also when other marine mammals are most likely to be present. While Alternative D would reduce the risk of vessel strikes to North Atlantic right whales and other marine mammals in and around the WEAs, as a whole, it is not anticipated that the impacts of Alternative D would be substantially different from those anticipated in connection with Alternative A. In its Concurrence letter, NMFS indicated that, should Alternative A be implemented in accordance with BOEM's mandatory project design criteria (*see* Appendix B of the EA), it is unlikely that project-related activities would adversely affect marine mammals, including the right whale (USDOC, NOAA, NMFS, 2011c). Therefore, the degree of benefit to the right whale associated with selecting alternative D is anticipated to be marginal. Since Alternative D would be narrowing the window of time to complete meteorological tower construction and site characterization activities and could result in additional biological surveys, Alternative D may result in slightly greater overall impacts, but not

significant impacts, on air and water quality than would Alternative A (*see* Section 4.4 of this EA).

Environmental and Socioeconomic Consequences of Alternative E (Removal of Inclement Weather Diversion and USCG Category A Areas Offshore Virginia) (Proposed Action - Preferred Alternative)

Under Alternative E, lease issuance and approval of site assessment activities could occur in all areas of the WEAs offshore New Jersey, Delaware, Maryland and Virginia, except for two full and five partial blocks OCS blocks in the Virginia WEA identified by the American Waterways Operators and USCG as presenting navigational safety issues, assuming leases in the areas other than the excluded blocks would be developed with commercial wind energy facilities in the future. Like Alternative A, the reasonably foreseeable impacts of Alternative E would not be significant, although they would be less than Alternative A within and around the Virginia WEA. The potential impacts of Alternative E would not be significant and would differ from the proposed action only within the Virginia WEA and in the coastal and harbor areas of Virginia. Compared with Alternative A, the reduced level of survey and construction activities under Alternative E would reduce the impacts on environmental resources within the vicinity of the Virginia WEA, while producing slightly fewer positive impacts on the population and employment of coastal counties of Virginia. Since survey and meteorological tower construction activities that could impact vessel traffic density and patterns would not occur in the excluded blocks, Alternative E would present a lower risk of collisions and allisions than would Alternative A, and would have generally lower environmental impacts than would Alternative A. *See* Section 4.5 of the EA.

Alternative E has been identified as the preferred alternative because it maximizes the potential leasing area while avoiding those areas within the WEA offshore Virginia that, should they ultimately be developed with wind generation facilities, could pose a risk to navigational safety. Although BOEM is not currently considering approving any COPs for wind energy generation facilities in any area offshore the Mid-Atlantic States that could pose such a risk, it would make little sense to give priority to issuing leases in these areas that the USCG currently believes would not be suitable for development in the future (*see also* Section 2.3 of the EA). Therefore, and for the same reasons it eliminated USCG "Category A" areas from priority leasing in the Maryland WEA during scoping, BOEM ultimately identified Alternative E as the proposed action and the preferred alternative (*see* Chapter 2 and Section 4.5. of the EA).

Environmental and Socioeconomic Consequences of Alternative F (No Action)

Under the No Action alternative, no OCS wind energy leases would be issued and no new site assessment activities would be approved within the WEAs offshore New Jersey, Delaware, Maryland and Virginia at this time. While any potential environmental and socioeconomic impacts from these activities would not occur or would be postponed, the collection of data necessary to successfully determine the feasibility of the proposed lease areas for commercial wind energy development from a dedicated data collection facility would not occur and site

characterization surveys would not likely occur. However, Alternative F would not meet the purpose and need.

Supporting Documents

The following environmental documents are available upon request or at http://www.boem.gov/Renewable-Energy-Program/index.aspx:

Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore New Jersey, Delaware, Maryland, and Virginia - Final Environmental Assessment (attached)

Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf, Final Environmental Impact Statement, (USDOI, MMS, 2007)

Conclusion

I have thoroughly considered the prominent issues and concerns identified in the EA and by the public and cooperating and consulting agencies in their comments, as well as the evaluation of the potential effects of the proposed action and alternatives in the attached EA. It is my determination that there are no substantial questions regarding the reasonably foreseeable impacts of the proposed action or alternatives, and that no reasonably foreseeable significant impacts are expected to occur as the result of the preferred alternative or any of the alternatives contemplated in the EA. It is therefore my determination that implementing the proposed action or any of the alternatives would not constitute a major federal action significantly affecting the quality of the human environment under Section 102(2)(C) of the National Environmental Policy Act of 1969. As a result, an EIS is not required, and I am issuing this finding of no significant impact.

Alan D. Thornhill
Chief Environmental Officer
Bureau of Ocean Energy Management

20 Jan 12
Date