RECORD OF DECISION

Establishment of an OCS Alternative Energy and Alternate Use Program

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U. S. Department of the Interior
Minerals Management Service
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Director, Minerals Management Service

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Date

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1 INTRODUCTION

This Record of Decision (ROD) records the decision that the Minerals Management Service (MMS) reached to select the Preferred Alternative set forth in detail in the Final Programmatic Environmental Impact Statement (Final Programmatic EIS) (MMS 2007) and establish an Alternative Energy and Alternate Use (AEAU) Program. The environmental impacts of the AEAU Program are analyzed in the Final Programmatic EIS (*Final Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf* (MMS, 2007). The Final Programmatic EIS was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), 42 USC 4321 et seq., the Council on Environmental Quality (CEQ) regulations, 40 CFR Parts 1500–1508, and Part 516 of the Department of the Interior Departmental Manual.

Under the AEAU program, MMS may issue a lease, easement and right-of-way (ROW) for AEAU activities on the Outer Continental Shelf (OCS), pursuant to Section 388 of the Energy Policy Act of 2005 (EPAct), and codified in subsection 8(p) of the Outer Continental Shelf Lands Act (OCSLA). Section 388 of the EPAct, grants the Secretary of the Interior (Secretary) discretionary authority to issue leases, easements, or ROWs for activities on the OCS that produce or support production, transportation, or transmission of energy from sources other than oil and gas, and are not otherwise authorized by law. Examples of the general types of alternative energy project activities that MMS has the discretion to authorize may include, but are not limited to: wind energy, wave energy, ocean current energy, solar energy, and hydrogen production. The Secretary delegated this authority to the MMS.

Section 388 of the EPAct also grants the Secretary authority to issue leases, easements, or ROWs for other OCS project activities that make alternate use of existing OCS facilities for "energy-related purposes or for other authorized marine-related purposes," to the extent such activities are not otherwise authorized by law. Such activities may include, but are not limited to: offshore aquaculture, research, education, recreation, and support for operations and facilities authorized under OCSLA. The Secretary delegated this authority to MMS as well.

Pursuant to this decision, MMS will publish a proposed rule that would establish the framework for issuing leases, easements, and ROWs for AEAU activities on the OCS. The proposed rule will be published in the Federal Register, and will seek public comment on, processes and procedures governing the issuance of leases, easements, or ROWs, and the regulation of AEAU activities on the OCS. The MMS will conduct a separate NEPA analysis that supports this rulemaking, which will tier-off of the Programmatic EIS analysis and incorporate by reference as appropriate.

2 DECISION

The decision is to select the Preferred Alternative, described in Section 3 below, and in the Final Programmatic EIS. This decision establishes an AEAU Program for the issuance of leases, easements, and ROWs for alternative energy activities and the alternate use of structures on the OCS as well as the promulgation of regulations to govern the program. With the selection of the Preferred Alternative, MMS has the additional option to authorize individual AEAU projects that are in the national interest prior to promulgation of the final rule. At the same time, MMS will vigorously pursue its efforts to complete a comprehensive program with regulations for authorizing and managing AEAU activities on the OCS. The MMS received comments on the Final Programmatic EIS from the Environmental Protection Agency, the National Oceanic and Atmospheric Administration, and the Commonwealth of Virginia (Office of Environmental Impact Review). The MMS considered these comments in its decision. The comments may be viewed on the Final Programmatic EIS website: ocsenergy.anl.gov.

As initial mitigation measures, this decision also adopts the interim policies provided in Attachment A and initial best management practices (BMPs) in Attachment B, except as provided below. These interim policies and BMPs adopted in this ROD were developed as mitigation measures in the Final Programmatic EIS. Reviews of mitigation guidance developed elsewhere (Michel *et al.* 2007), scoping comments, and public review of the Draft Programmatic EIS (Appendix B, MMS 2007) were also considered. In addition, several of the interim policies and BMPs are based on the significant experience of the MMS issuing leases, easements, and ROWs related to mineral recovery on the OCS. On the basis of these reviews and experience, the MMS identified interim policies and BMPs that may be applicable to a range of AEAU projects that could be developed on the OCS. Once incorporated as a binding stipulation in the authorizing instrument, MMS will monitor and enforce compliance through the terms and conditions of the lease or grant instrument. These mitigation measures, established by MMS before promulgation of the final program regulations, ensure that all practicable means to avoid or minimize environmental harm have been adopted for the Agency's selected alternative in this decision. Further site-specific mitigation measures for AEAU project proposals in the form of stipulations will be considered with the issuance of any lease, easement, or ROW on the OCS.

The interim policies will guide and inform MMS's decisionmaking when considering any proposal for an AEAU project on the OCS. In addition, MMS will consider, and, on a case-by-case basis, may select one or more of the BMPs as appropriate to be included as a binding stipulation in any lease, easement, or ROW for AEAU activities that it issues.

- The MMS does not adopt BMP No. 28 in this decision - *Wind turbine rotors should not come within 30 m (100 ft) of the ocean surface to minimize impacts to water birds.* Upon further review, MMS determined that not enough field information is available on a nationwide basis to make the determination for this requirement. Instead, MMS will consider the appropriate rotor clearance on a case-by-case basis during the environmental review for each wind project.

- The BMP No. 30 is covered by Policy No. 1 and therefore is not adopted.

As projects are developed and new information is collected, the MMS will update these interim policies and BMPs. In addition, MMS will use the existing MMS Environmental Studies Program, currently used for the MMS oil and gas and sand and gravel programs, to identify and procure environmental studies, including baseline studies, for the AEAU Program.

The MMS will consult with Federal and State government agencies on AEAU projects pursuant to the policies identified in Attachment A. The MMS will use existing consultation processes for the oil and gas and sand and gravel programs to coordinate with Federal and State government agencies. The MMS will also use its established advisory committees, such as the MMS OCS Policy Committee, and the MMS OCS Scientific Committee; and, where appropriate, will create new committees, task forces, or working groups with Federal and State agencies to address issues associated with the AEAU program.

3 ALTERNATIVES, INCLUDING THE PROPOSED ACTION

The Final Programmatic EIS analyzes four alternatives. The EIS analyzes potential AEAU activities that could occur should MMS exercise its discretion to issue leases, easements, and ROWs on the OCS. The proposed action is to establish an AEAU Program to provide oversight of development activities in a consistent manner through rulemaking. Alternatives to the proposed action considered are: (1) Case-by-case review and decision; (2) No action, where the MMS discretion would not be exercised; and (3) Preferred alternative, a combination of the proposed action and the case-by-case alternative. The alternatives, including the proposed action, are set forth below:

Proposed action: Establish an AEAU Program through Rulemaking. The proposed action is the establishment of a comprehensive, nationwide AEAU Program on the Federal OCS, through rulemaking. The proposed action would include formal regulations for the management of activities conducted on a lease, easement, or ROW on the OCS; issuance of guidance, policies, and BMPs; acquisition of baseline information through the conduct of environmental studies; and establishment of new consultation mechanisms with affected States and Federal agencies.

Under this alternative, MMS would establish the AEAU program and ultimately issue regulations governing activities related to isssuance of a lease, easement, or ROW for the production of alternative energy and for alternate use of existing OCS facilities. The activities related to the development of alternative energy resources on the OCS would include: characterization of a specific site or sites on the OCS for the purposes of assessing the feasibility of constructing an alternative energy facility; construction, operation, and decommissioning of demonstration-scale alternative energy and related facilities on the OCS and related environments (i.e., for associated facilities located in State waters or onshore) for the purposes of assessing the commercial feasibility of

certain technologies; and construction, operation, and eventual decommissioning of commercial-scale alternative energy production and related facilities on the OCS and in related environments.

Under the proposed action, MMS would establish a program that would permit, on a case-by-case basis, alternate uses for OCS facilities during and after production, subject to the requirements of subsection 8(p) of the OCSLA. Rules governing the siting, construction, operation, and decommissioning of oil and gas platforms and other facilities on the OCS are authorized under the OCSLA, as amended (43 USC 1331 *et seq.*). Current regulations (30 CFR Part 250, Subpart Q) require that an OCS facility be removed and the site cleared to predevelopment conditions within 1 year after the lease or pipeline ROW terminates, unless approval is given to conduct other activities (30 CFR 250.1725) or a structure is approved for a state artificial reef program (30 CFR 250.1730). Potential alternate uses for these facilities include offshore aquaculture and research and monitoring.

Case-by-case alternative. Under the case-by-case alternative, the MMS would evaluate individual AEAU project proposals on a case-by-case basis as they are submitted by applicants. The case-by-case alternative would have minimal administrative rules, application, and review process requirements. The case-by-case alternative would not have the same comprehensive, formal regulations for granting and managing a lease, easement, or ROW, or the same information requirements as the proposed action. Information collection through the Environmental Studies Program to support decisionmaking would be conducted on an "as needed" basis.

The evaluation of AEAU project proposals by the MMS would be performed pursuant to nationwide guidelines and informed by BMPs. An applicant's request for authorization under the case-by-case alternative would include a summary of the proposed activities and satisfactory evidence that the applicant is qualified to hold a lease, easement, or ROW on the OCS. The MMS would issue leases, easements, or ROWs that would be based on project-specific NEPA analyses tiered to the Final Programmatic EIS. The findings of individual NEPA analyses would form the basis of any mitigation requirements and would be incorporated into lease or grant terms and conditions. Authorized activities would be regulated by the terms and conditions established in individual lease, easement, and ROW instruments developed and issued for each project as well as conditions of approval for plans of operations.

No-action alternative. Under the no-action alternative, the MMS would not authorize AEAU activities on the OCS through the issuance of a lease, easement, or ROW. Potentially significant offshore alternative energy resources in the United States would remain largely undeveloped should the MMS not authorize development of alternative energy projects on the Federal OCS. However, individual States have the authority to approve development of offshore alternative energy resources on State submerged lands. Such state-authorized alternative energy projects would necessarily be much closer to the shoreline than projects sited on the Federal OCS. Further, should no development of alternative energy resources occur on the Federal OCS, increased energy demands would have to be satisfied by other sources, including fossil fuels, nuclear fuels, and onshore alternative energy resources.

In addition, under the no action alternative, there would be fewer opportunities to employ existing OCS facilities for alternate uses. The impacts of this loss would include potential restraints on scientific research, as well as restraints on the development and implementation of other potentially beneficial alternate uses of these facilities.

Preferred Alternative. Through the process of developing the Final Programmatic EIS, the MMS took a hard look at the alternatives and concluded that it would be preferable to approach development of an AEAU program by combining elements of the proposed action and the case-by-case alternative. The AEAU activities that would be the subject of approvals under the preferred alternative, the proposed action, and the case-by-case alternative, are the same. What differs is the process by which the MMS would approve such activities.

With the selection of the preferred alternative, MMS has the option to authorize individual projects that are in the national interest prior to promulgation of the final rule. At the same time, MMS will vigorously pursue its efforts to complete a comprehensive program with regulations for authorizing and managing AEAU activities on the OCS. Upon promulgation of the final rule, MMS leases, easements and ROWs for AEAU activities on the OCS would be issued subject to the rule's provisions.

Leases, easements, and ROWs issued under the preferred alternative prior to promulgation of the final rule would be subject to all the requirements of Section 388 of the EPAct 2005 and project-specific NEPA analyses. In addition, leases, easements and ROWs would include terms, conditions, and stipulations to ensure safe and environmentally-responsible operations on the OCS. Further, MMS would identify necessary mitigation measures on a case-by-case basis appropriate to specific AEAU project proposals.

The MMS considers the preferred alternative to be the environmentally preferable alternative. The combination of the proposed action and the case-by-case alternative may limit possible impacts associated with further delay in tapping the energy potential and environmental benefits of alternative energy projects on the OCS by allowing approval of such projects by the MMS before promulgation of the final rule. With the selection of the preferred alternative, electricity and other energy products derived from alternative energy resources on the OCS may now be a feasible response to increased energy demands.

4 MITIGATION AND MONITORING

An important product of the EIS process has been the identification of initial mitigation measures to minimize potential adverse impacts associated with the development of AEAU projects on the OCS. These initial mitigation measures, adopted as the interim policies and BMPs set forth in Attachments A and B, are identified in the Final Programmatic EIS. The interim policies will guide and inform MMS's decisionmaking when considering any proposal for an AEAU project on the OCS. In addition, MMS will consider, and, on a case-by-case basis, may select one or more of the BMPs to be included as a binding stipulation in any lease, easement or ROW for AEAU activities that it issues.

The interim policies and BMPs have provisions that require MMS and lessees and grantees to adopt adaptive management strategies. Adaptive management strategies are another way in which potential environmental impacts of AEAU projects on the OCS will be possibly avoided or minimized. In addition, the interim policies and BMPs contain provisions for periodic review and revision of programmatic policies and BMPs; development of appropriate site monitoring programs; and protocols for incorporating monitoring observations and new mitigation measures into standard operating procedures and project-specific stipulations. The MMS will employ and act by these policies when considering proposals submitted under the AEAU program.

5 PUBLIC INVOLVEMENT

A Notice of Intent (NOI) to prepare the *Outer Continental Shelf Renewable Energy and Alternate Use Programmatic EIS* was published in the Federal Register on May 5, 2006 (71 FR 26559). The NOI invited interested members of the public to provide comments on the scope and objectives of the EIS. The NOI stated that the Programmatic EIS would focus on the potential environmental effects of the National Offshore Alternate Energy-Related Use (AERU) program and related rulemaking, and invited public comments on the significant issues, alternatives, and mitigation measures to be considered. The AERU Program, (currently named the "Alternative Energy and Alternate Use Program" (AEAU Program)) was initiated to implement the statutory authority granted by Section 388 of EPAct, entitled "Alternate Energy-Related Uses on the Outer Continental Shelf." The NOI announced that the scoping period for the Programmatic EIS was open until July 5, 2006.

Public scoping meetings were held at 10 locations in May and June 2006: Herndon, Virginia (May 18); Trenton, New Jersey (May 23); Austin, Texas (May 23); Melville, New York (May 24); Dedham, Massachusetts (May 25); Long Beach, California (May 25); Atlanta, Georgia (June 6); Portland, Oregon (June 6), Orlando, Florida (June 8); and San Francisco, California (June 8). At each meeting, the MMS presented background information about the EIS, and representatives from the Department of Energy (DOE) National Renewable Energy Laboratory presented information about each type of technology. The presentation materials from these meetings, including slides, maps depicting the various planning area boundaries, and white papers for five potential technologies, were made available on the project website (ocsenergy.anl.gov).

Nearly 235 individuals, organizations, and Government Agencies provided comments on the scope of the programmatic EIS. Some used more than one method to submit comments. Nearly 100 comment documents were received from individuals. In addition, comments were received from 4 Federal Agencies, 16 state agencies, 2 local government organizations, and more than 70 other organizations, including environmental groups, interest groups, and industry. Comments were received from 26 states, the District of Columbia, and Canada. The scoping summary report and copies of the scoping meeting transcripts, individual letters and comments received electronically are available on the project website (ocsenergy.anl.gov).

A NOA of the Draft Programmatic EIS was published in the Federal Register on March 21, 2007 (72 FR 13307). The NOA provided information on how to obtain copies of the draft programmatic EIS and how to submit comments. Comments, submitted in letter form through

the mail, on-line through the Internet at the MMS's website for the Draft Programmatic EIS, or in person at a public hearing, were accepted for 60 days following publication of the NOA.

Public hearings were held at nine locations across the United States in April and May 2007. Hearings were held in Washington, DC (April 16), Long Branch, New Jersey (April 24), Melville, New York (April 25), Newton, Massachusetts (April 26), Houston, Texas (May 1), San Francisco, California (May 1), Portland, Oregon (May 2), Miami Springs, Florida (May 2), and Charleston, South Carolina (May 3).

Nearly 200 individuals, organizations, and government agencies provided comments on the Draft Programmatic EIS. Some used more than one method to submit comments. Nearly 90 comments were received from individuals. In addition, comments were received from 6 Federal Agencies, 22 state agencies, 4 local government organizations, and more than 60 other organizations, including environmental groups, interest groups, and industry. Comments were received from 27 states and the District of Columbia. Responses to the comments are available in Appendix B of the Final Programmatic EIS. Copies of the public hearing transcripts, individual letters and comments received electronically are available on the project website (ocsenergy.anl.gov).

6 REFERENCES

Michel, J. *et al.*, 2007. *Worldwide Synthesis and Analysis of Existing Information Regarding Environmental Effects of Alternative Energy Uses on the Outer Continental Shelf,* MMS 2007-038, U.S. Department of the Interior, Minerals Management Service, Herndon, VA.

MMS, 2007. *Final Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf.* OCS EIS/EA MMS 2007-046. 4 Volumes.

ATTACHMENT A

Decision Table for Proposed Policies

Proposed Policy	Adopted	Not Adopted
1. The MMS shall *not* issue leases, easements, or rights-of-way for alternative energy activities on the OCS in areas in which development is prohibited by existing law or regulation, including within the exterior boundaries of any unit of the National Park System, National Wildlife Refuge System, National Marine Sanctuary System, or any National Monument, as well as areas of critical environmental concern and shipping safety fairways. Additional areas will be excluded on a site-specific basis if resource impacts are identified that cannot be adequately mitigated.	X	
2. The OCS alternative energy projects shall be developed in a manner that does not unreasonably prevent other permissible uses of the OCS and adjacent waters.	X	
3. Lessees and grantees seeking to develop projects on the OCS are encouraged to consult with all appropriate Federal, state, and local agencies regarding the project as early in the planning process as possible.	X	
4. The MMS will initiate consultation with state and local government agencies having responsibilities that might be directly and substantially affected by activities on the OCS early in the planning process. Siting, construction, operation, and decommissioning issues will be identified and addressed.	X	
5. The MMS will work toward an interagency agreement with the U.S. Department of Defense (USDOD) to establish a process to facilitate consultations about the issuance of leases, easements, or ROWs for an AEAU project on the OCS. Entities seeking to develop projects on the OCS may be required to consult with USDOD regarding the location of the project and siting of facilities.	X	
6. The MMS will consult with the National Oceanic and Atmospheric Administration (NOAA) and U.S. Fish and Wildlife Service (USFWS) as required by Section 7 of the Endangered Species Act as early in the planning process as possible.	X	

Proposed Policy	Adopted	Not Adopted
7. The MMS will require the lessee to contact the National Marine Fisheries Service (NMFS) and/or USFWS, when a marine mammal species may be potentially affected, to determine whether authorization under the Marine Mammal Protection Act (MMPA) is required. If NMFS and/or USFWS determine that such authorization is required, the authorization must be issued prior to an activity occurring under MMS authority.	X	
8. The MMS will consult with the NMFS concerning Essential Fish Habitat (EFH) as required by the Magnuson-Stevens Fishery Conservation and Management Act as early in the planning process as possible.	X	
9. The MMS will consult with the State Historic Preservation Office (SHPO) as required by Section 106 of the National Historic Preservation Act of 1966 (NHPA). The specific consultation requirements will be determined on a project-by-project basis (e.g., wind projects will require that visual impacts on historic properties be evaluated and may not apply to other project types). If programmatic Section 106 consultations have been conducted and are adequate to cover a proposed project, additional consultation may not be needed.	X	
10. The MMS will consult with the appropriate Coastal Zone Management entity prior to lease sales as required to ensure compliance with the consistency provisions of the Coastal Zone Management Act.	X	
11. When appropriate, site-specific environmental analysis for individual projects shall utilize information from this programmatic EIS and other NEPA documents.	X	
12. The MMS will pursue the creation of categorical exclusions under NEPA for activities that, upon adequate evaluation, are determined not to have a potential to result in significant impact on the environment (e.g., site characterization, meteorological tower installation, and technology testing of small devices).	X	
13. The MMS will consider the visual and scenic resource	X	

Proposed Policy	Adopted	Not Adopted
value of the OCS and coastal waters involved in proposed wind energy development projects. The MMS will work with the applicant to incorporate visual design considerations into the planning and design of development projects to minimize potential visual impacts.		
14. The MMS will consider the benefits (including carbon-related benefits) of alternative-energy projects in evaluating the potential impacts on environmental, visual, and socioeconomic resources.	X	
15. The MMS will implement adaptive management strategies that will include the monitoring of activities to ensure that potential adverse impacts of OCS alternative energy development are avoided (if possible), minimized, or mitigated.	X	

ATTACHMENT B
Decision Table for Best Management Practices

Phase/Resource	Proposed BMP	Adopted	Not Adopted
Preconstruction Planning			
	1. Lessees and grantees shall minimize the area disturbed by preconstruction site monitoring and testing activities and installations.	X	
	2. Lessees and grantees shall contact and consult with the appropriate affected Federal, state, and local agencies early in the planning process.	X	
	3. Lessees and grantees shall consolidate necessary infrastructure requirements between projects whenever practicable.	X	
	4. Lessees and grantees shall develop a monitoring program to ensure that environmental conditions are monitored during construction, operation, and decommissioning phases. The monitoring program requirements, including adaptive management strategies, shall be established at the project level to ensure that potential adverse impacts are mitigated.	X	
Seafloor Habitats			
	5. Lessees and grantees shall conduct seafloor surveys in the early phases of a project to ensure that the alternative energy project is sited appropriately to avoid or minimize potential impacts associated with seafloor instability or other hazards.	X	

Phase/Resource	Proposed BMP	Adopted	Not Adopted
	6. Lessees and grantees shall conduct appropriate presiting surveys to identify and characterize potentially sensitive seafloor habitats and topographic features.	X	
	7. Lessees and grantees shall avoid locating facilities near known sensitive seafloor habitats, such as coral reefs, hard-bottom areas, and chemosynthetic communities.	X	
	8. Lessees and grantees shall avoid anchoring on sensitive seafloor habitats.	X	
	9. Lessees and grantees shall minimize seafloor disturbance during construction and installation of the facility and associated infrastructure.	X	
	10. Lessees and grantees shall employ appropriate shielding for underwater cables to control the intensity of electromagnetic fields.	X	
	11. Lessees and grantees shall reduce scouring action by ocean currents around foundations and to seafloor topography by taking all reasonable measures and employing periodic routine inspections to ensure structural integrity.	X	
	12. Lessees and grantees shall avoid the use of explosives when feasible to minimize impacts to fish and other benthic organisms.	X	
	13. Lessees and grantees shall take all reasonable actions to minimize seabed disturbance and sediment dispersion during cable installation.	X	

Phase/Resource	Proposed BMP	Adopted	Not Adopted
Marine Mammals			
	14. Lessees and grantees shall evaluate marine mammal use of the proposed project area and design the project to minimize and mitigate the potential for mortality or disturbance. The amount and extent of ecological baseline data required will be determined on a project basis.	X	
	15. Vessels related to project planning, construction, and operation shall travel at reduced speeds when assemblages of cetaceans are observed and maintain a reasonable distance from whales, small cetaceans, and sea turtles as determined during site-specific consultations.	X	
	16. Lessees and grantees shall minimize potential vessel impacts to marine mammals and sea turtles by requiring project-related vessels to follow the NMFS Regional Viewing Guidelines while in transit. Operators shall be required to undergo training on applicable vessel guidelines.	X	
	17. Lessees and grantees shall take efforts to minimize disruption and disturbance to marine life from sound emissions, such as pile driving, during construction activities.	X	
	18. Lessees and grantees shall avoid and minimize impacts to marine species and habitat in the project area by posting a qualified observer approved by the MMS and NMFS on-site during construction activities.	X	
Fish Resources and Essential Fish Habitat			
	19. Lessees and grantees shall conduct presiting surveys (may use existing	X	

Phase/Resource	Proposed BMP	Adopted	Not Adopted
	data) to identify important, sensitive, and unique marine habitats in the vicinity of the project and design the project to avoid, minimize, or otherwise mitigate adverse impacts to these habitats.		
	20. Lessees and grantees shall minimize construction activities in areas containing anadromous fish during migration periods.	X	
	21. Lessees and grantees shall minimize seafloor disturbance during construction and installation of the facility and associated infrastructure.	X	
Sea Turtles			
	22. Lessees and grantees shall minimize potential vessel impacts to marine mammals and sea turtles by requiring project-related vessels to follow the NMFS Regional Viewing Guidelines while in transit. Operators shall be required to undergo training on applicable vessel guidelines.	X	
	23. Lessees and grantees shall take efforts to minimize disruption and disturbance to marine life from sound emissions, such as pile driving, during construction activities.	X	
	24. Lessees and grantees shall locate cable landfalls and onshore facilities so as to avoid impacts to known nesting beaches.	X	
Avian Resources			
	25. The Lessee shall evaluate avian use of the project area and design the project to minimize or mitigate the potential for bird strikes and habitat loss. The amount and extent of	X	

Phase/Resource	Proposed BMP	Adopted	Not Adopted
	ecological baseline data required will be determined on a project-by-project basis.		
	26. Lessees and grantees shall take measures to reduce perching opportunities.	X	
	27. Lessees and grantees shall locate cable landfalls and onshore facilities so as to avoid impacts to known nesting beaches.	X	
	28. Wind turbine rotors should not come within 30 m (100 ft) of the ocean surface to minimize impacts to water birds.		X (see explanation in Section 2 of ROD)
	29. Lessees and grantees shall comply with Federal Aviation Administration (FAA) and USCG requirements for lighting while using lighting technology (e.g., low-intensity strobe lights) that minimizes impacts to avian species.	X	
Areas of Special Concern			
	30. The MMS shall *not* issue leases, easements, or rights-of-way for alternative energy activities on the OCS in areas in which the development is excluded by law or regulation, including within the exterior boundaries of any National Park System, National Wildlife Refuge System, National Marine Sanctuary System, or any National Monument.		X (See explanation in Section 2 of ROD)
Acoustic Environment			
	31. Lessees and grantees should plan site characterization surveys by using the lowest sound levels necessary to obtain the information needed.	X	

Phase/Resource	Proposed BMP	Adopted	Not Adopted
	32. Lessees and grantees shall take efforts to minimize disruption and disturbance to marine life from sound emissions, such as pile driving, during construction activities.	X	
	33. Lessees and grantees shall employ, to the extent practicable, state-of-the-art, low-noise turbines or other technologies to minimize operational sound effects.	X	
Fisheries			
	34. 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.	X	
	35. Lessees and grantees shall review planned activities with potentially affected fishing organizations and port authorities to prevent unreasonable fishing gear conflicts. Lessees and grantees shall minimize conflict with commercial fishing activity and gear by notifying registered fishermen of the location and time frame of project construction activities well in advance of mobilization with updates throughout the construction period.	X	
	36. Lessees and grantees shall use practices and operating procedures that reduce the likelihood of vessel accidents and fuel spills.	X	
	37. Lessees and grantees shall avoid or minimize impacts to the commercial fishing industry by marking applicable structures (e.g., wind turbines, wave	X	

Phase/Resource	Proposed BMP	Adopted	Not Adopted
	generation structures) with USCG-approved measures (such as lighting) to ensure safe vessel operation.		
	38. Lessees and grantees shall avoid or minimize impacts to the commercial fishing industry by burying cables, where practicable, to avoid conflict with fishing vessels and gear operation. If cables are buried, Lessees and grantees shall inspect cable burial depth periodically during project operation to ensure that adequate coverage is maintained to avoid interference with fishing gear/activity.	X	
Coastal Habitats			
	39. Lessees and grantees shall avoid hard-bottom habitats, including seagrass communities and kelp beds, where practicable, and restore any damage to these communities.	X	
	40. Lessees and grantees shall implement turbidity reduction measures to minimize effects to hard-bottom habitats, including seagrass communities and kelp beds, from construction activities.	X	
	41. Lessees and grantees shall minimize effects to seagrass and kelp beds by restricting vessel traffic to established traffic routes.	X	
	42. Lessees and grantees shall minimize impacts to wetlands by maintaining buffers around wetlands, implementing BMPs for erosion and sediment control, and maintaining natural surface drainage patterns.	X	
Electromagnetic Fields			

Phase/Resource	Proposed BMP	Adopted	Not Adopted
	43. Lessees and grantees shall use submarine cables that have proper electrical shielding and bury the cables in the seafloor where practicable.	X	
Transportation and Vessel Traffic			
	44. Lessees and grantees shall site alternative energy facilities to avoid unreasonable interference with major ports and USCG-designated Traffic Separation Schemes.	X	
	45. Lessees and grantees shall meet FAA guidelines for siting and lighting of facilities.	X	
	46. Lessees and grantees shall place proper lighting and signage on applicable alternative energy structures to aid navigation per USCG circular NVIC 07-02 (USCG 2007) and comply with any other applicable USCG requirements.	X	
	47. Lessees and grantees shall conduct all necessary studies of potential interference of proposed wind turbine generators with commercial air traffic control radar systems, national defense radar systems, and weather radar systems, including identification of possible solutions.	X	
Visual Resources			
	48. Lessees and grantees for wind projects shall address key design elements, including visual uniformity, use of tubular towers, and proportion and color of turbines.	X	
	49. Lessees and grantees for wind projects shall use appropriate viewshed mapping,	X	

Phase/Resource	Proposed BMP	Adopted	Not Adopted
	photographic and virtual simulations, computer simulation, and field inventory techniques to determine with reasonable accuracy the visibility of the proposed project. Simulations should illustrate sensitive and scenic viewpoints.		
	50. Lessees and grantees shall comply with FAA and USCG requirements for lighting while minimizing the impacts through appropriate application.	X	
	51. Lessees and grantees shall seek public input in evaluating the visual site design elements of proposed wind energy facilities.	X	
	52. Within FAA guidelines, directional aviation lights that minimize visibility from shore should be used.	X	
Cultural Resources			
	53. Lessees and grantees shall conduct magnetometer tows using 30-m (100-ft) line spacing in areas where there is a high potential for shipwrecks.	X	
Operations			
	54. Lessees and grantees shall prepare waste management plans, hazardous material plans, and oil spill prevention plans, as appropriate, for the facility.	X	