

**Minerals Management Service  
Regional Stakeholder Meetings  
Boston, Massachusetts  
January 10-11, 2007  
Meeting Notes**

**Welcome and Opening Remarks**

Maureen Bornholdt, program manager of the Department of Interior's Minerals Management Service (MMS) Alternative Energy and Alternate Use Program on the Outer Continental Shelf (OCS), described the intent of the regional stakeholder meetings. Through Section 388 of the Energy Policy Act of 2005, the Department of Interior has the authority to regulate alternative energy and alternate use projects on the OCS. MMS is currently developing the Alternative Energy and Alternate Use Program and intends to use the regional stakeholder meetings to learn who the stakeholders are in New England, what issues and concerns the local stakeholders have with development of alternative energy on the OCS, what the present and estimated future energy sources are, and who the regulators are. This information will be used by MMS in the development of the Alternative Energy and Alternate Use Program.

MMS plans to issue a Draft Programmatic Environmental Impact Statement (PEIS) for the Alternative Energy and Alternate Use Program in the winter of 2006-2007 and the Final PEIS at the end of the summer 2007. MMS will convene a strategic studies plan workshop in spring 2007 and develop a strategic studies plan by fall 2007.

Jon Taylor, facilitator from Kearns & West, led the attendees in an open discussion covering the following topics: stakeholders, issues and concerns, energy profile, current and future technologies, and state and local regulations. What follows is a summary of the individual attendees' remarks. Representatives of MMS neither solicited nor received any collective advice or recommendations from the attendees as a whole.

**Stakeholders**

Meeting attendees identified additional stakeholders who should be involved in future communications and meetings for the Alternative Energy and Alternate Use Program. These stakeholders are listed in Appendix 1.

**Issues and Concerns**

Meeting attendees identified major issues and concerns regarding development of the Alternative Energy and Alternate Use Program.

Regulatory Program Development

- The United Kingdom has created a Research Advisory Group (RAG) to allocate funding to generate generic, priority research to develop objective information for project use.
- The establishment of Best Management Practices would require all developers to follow similar criteria for project development. Additional site-specific requirements could be used, similar to those found in the Bureau of Land Management's onshore wind development program.

- Concerned that MMS may not place boundaries on the alternatives to be analyzed during the environmental review process to ensure that only relevant alternatives are provided.
- Regional planning provides a simpler structure for oversight than state-by-state planning.
- Concerned that MMS may not incorporate future technologies in the range of alternatives identified in the regulatory program.
- Concerned that MMS may not consider handling compensation for public trust and foreclosed leases, that MMS may not require consistency with state planning and other efforts, and that MMS may not establish specific decision-making approval criteria.
- In the Federal Energy Regulatory Commission (FERC) Programmatic Environmental Impact Statement (PEIS) for Liquefied Natural Gas (LNG), the Commission placed boundaries on what alternatives should be considered. This may be a useful model for MMS.
- Concerned that MMS may not create a set of best management practices for pre-construction studies and post-construction adaptive management processes.
- Concerned that MMS may not consider ways to interface with current incentives such as the production tax credit and renewable portfolio standards when developing the regulatory program.
- Concerned that the MMS regulatory process may require duplicate efforts for other regulatory bodies, thereby causing regulatory uncertainty and hindering project financing.
- The NEPA process is simple and provides an opportunity to gather necessary information and examine all the opportunities and impacts. The process may provide all the data required for the regulatory program.
- Certain agencies are not authorized to balance resources, needs, or impacts; that is the job of MMS.
- Concerned that MMS may not provide adequate funding or incentive to allow renewable energy technologies fully develop on the OCS.
- Concerned that MMS may not coordinate with FERC regarding jurisdictional overlaps.
- Concerned that MMS may not clarify the roles and responsibilities of other federal agencies in its regulatory program.
- Concerned that the regulatory program may not include development of a competitive process to solicit bids for alternative energy development that has minimal environmental impacts following mitigation and is feasible economically (as determined by society and not solely by the developer); and may not include lease conditions for use of public bottomlands, maintenance and removal of structures after the project is finished.
- Concerned that MMS may not perform a public interest assessment of the OCS resources, including determining how and where different members of the public use the OCS, in order to maximize public benefit and reduce conflict between alternative energy development and these pre-existing uses.
- Concerned that the regulatory program may conflict with the Massachusetts energy facility siting process, power markets, and renewable energy portfolio requirements.

- It may be useful to have the first few offshore renewable energy projects be publicly developed in order to secure public support. Afterwards, projects can be privately developed.

#### Revenues/Fees

- Concerned that MMS may not consider other models for designing the regulatory fee and revenue sharing formulas.
- Concerned that MMS may not consider a revenue sharing model similar to that employed for oil and gas leasing, which provides 50% of funds to the federal government, 35% to the local government, and 15% to the state.
- Leasing fees for use of offshore areas could be used to fund monitoring and studies, revenue sharing to coastal states, or into land or water conservation trusts.
- Concerned that MMS may not provide appropriate compensation to the U.S. Government and the Commonwealth of Massachusetts for use of public waters.

#### Stakeholder Involvement

- Concerned that MMS may not establish a collaborative process to convene Northeast regional stakeholders to foster coordination, identify potential conflicts, and share data and study recommendations to identify and evaluate the suitability of several priority wind development areas.
- The Canadian Eastern Scotian Shelf Integrated Management Plan (ESSIM) may be a useful model for attempts to resolve multi-user conflicts.
- Concerned that the public may not have an appropriate process for raising issues and that the program may not allow all issues to be resolved prior to approval of the project application.
- Concerned that the MMS program may not include sufficient input from agencies with significant OCS and related resource experience.
- Concerned that MMS may not continue to involve all affected stakeholders as the program moves forward.
- The regulatory program would benefit from conversations within interest groups (e.g., fishing groups or shipping interests).
- Concerned that MMS may not require that a project applicant submit a public/stakeholder outreach plan as part of an initial application to identify stakeholders and the means through which the applicant will provide information and receive feedback.

#### Pilot/Demonstration Project Development

- Current ocean energy projects in Massachusetts and other states may serve as pilot projects to help define best practices for technology development.
- Concerned that permitting for experimental or pilot projects may not include a clear definition of expectations for such short-term projects.
- Concerned that MMS may not identify zones for development of pilot projects.
- Concerned that MMS may not recognize the need for demonstration project deployment for the wave, current, and tidal energy industries.

### Siting and Energy Development

- Concerned that the regulatory program may not take into account where particular energy activities take place in order to ensure thoughtful development of OCS resources.
- Concerned that MMS may not prioritize areas suitable for offshore renewable energy development and may not do scoping-level environmental analysis of these areas.
- Concerned that MMS may provide guidelines on which areas of the OCS should be developed.
- Concerned that zoning the ocean to establish proposed regions for development will be too large a project to undertake and may prove too large to prevent adverse impacts to ocean resources.
- The United Kingdom provides upfront planning and research to identify preferred sites for developers and to enhance technology development.
- It will be difficult to identify broad zones for OCS development because each technology has highly specific requirements for development sites and relatively few regions of the OCS will be viable.
- Concerned that a prohibition on co-location of multiple types of energy projects in a specific area of the OCS could be detrimental to the wave energy industry.
- Concerned that there may not be an integrated energy policy to guide the different permitting agencies to work in tandem and develop energy projects with regional needs in mind.
- Concerned that MMS may not encourage a full range of technological options which might be best suited to particular ecosystems, rather than leaving development in the hands of the best funded developer whose business plan and technology is quickest to market.
- Concerned that MMS may not work with FERC, regional transmission offices, and state energy offices to assess the responsibility for planning, financing, and developing an offshore transmission network, with responsibility shared with relevant system operators and transmission asset owners.
- Concerned that MMS may not look at regional transmission corridors on the OCS and ensure that there are not cables crossing in the ocean. Establishing a right of way for transmission cables might make that development easier to manage.
- It will be difficult to develop pilot projects for deepwater offshore wind energy because of the cost inherent in placing transmission lines over such a long distance. Perhaps there will be opportunities for sharing the cost of transmission lines.

### Baseline Information

- Concerned that the regulatory program may not provide an adequate opportunity for agencies to gather necessary information.
- Concerned that not enough baseline data exists.
- Concerned that if MMS includes adaptive management in the regulatory program it may become a surrogate for having solid baseline information before the project is installed.
- Concerned that MMS may not provide a method for performing scientific studies quickly in order to establish baseline data.
- Concerned that MMS may not establish a baseline of data on air quality and avian issues that affect siting and planning.

### Environmental Impacts, Studies, and Mitigation

- Concerned that MMS may not consider the cumulative effects of all competing uses when considering permitting a proposed project.
- Concerned that the seasonality of migrating birds and marine mammals may not be considered when studies are performed.
- Concerned that MMS may not provide guidance regarding appropriate mitigation measures for the impacts of specific types of alternative energy projects.
- A recently-released study from the Denmark Horns Rev offshore wind project illustrates the environmental impact of offshore wind energy and may be applicable for United States offshore energy projects.
- Concerned that MMS may not consider the beneficial impacts of proposed projects, such as replacement of fossil fuels or other “green” aspects.
- Concerned that the environmental studies portion of MMS’s program may be under-funded.
- Concerned that MMS may not move fast enough to permit proposed projects to mitigate the effects of climate change.
- Concerned that MMS may not provide a characterization of the environmental impacts expected from each emerging offshore technology.
- Currently there are few good studies on OCS fisheries.
- Concerned that MMS may not consider performing avian observations and other ocean ecosystem studies concurrently with ongoing ocean observations.
- Cooperative research efforts will aid the development of these alternative energy technologies and will further the research and environmental studies.
- Concerned that MMS may require an unnecessary level of detail when asking developers to define near-field and far-field effects of proposed projects.
- Concerned that MMS may not develop a set of criteria for study requests, as FERC has done in its hydroelectric Integrated Licensing Process.
- Concerned that because MMS does not have jurisdiction over all facilities in the ocean, undue impacts may result in specific areas of the ocean.
- Including wind turbine towers as categorical exclusions in pilot programs would allow developers to gather study data faster.
- Because of the vulnerability of certain habitat areas or species, some areas may be more appropriate for specific types of technology.
- Concerned that MMS may not rule out key seasonal high use areas with sensitive habitat or marine life or other areas where there are significant conflicts with marine protected species and habitats.
- Concerned that MMS may not conduct mapping to show key migratory corridors or seasonal high use areas, essential fish habitat, sensitive benthic zones, and/or the presence of endangered or otherwise fragile species and may not use such maps to indicate areas that may be more or less appropriate for certain types of energy development prior to the commitment of resources by any potential applicant.
- Because of high use of coastal habitats by protected species of migratory birds and marine mammals, and the greater concentration of key spawning areas for fish, it may be more appropriate to consider siting that is in deeper water and/or further offshore.

- Concerned that MMS may not conduct robust modeling exercises to project the impacts of specific types of technologies.
- Concerned that MMS may not consider NOAA's Essential Fish Habitat (EFH) Process when designing the regulatory program.
- Concerned that MMS may not clarify at which stage (during the programmatic EIS or site-specific EIS) MMS will initiate consultation with NOAA under Essential Fish Habitat (EFH), Endangered Species Act (ESA), and National Marine Sanctuaries Act. An EFG or ESA consultation based solely on the Programmatic EIS would lack site-specific information necessary for a full evaluation of issues and impacts.
- Concerned that MMS may not establish a Study Fund to support generic environmental studies to assist in the early stages of the offshore wind industry. Such a Fund could be based upon various royalty payments and the interest accruing from financial deposits made by developers.
- Weighting criteria have been developed for various projects that allow developers to understand the relative importance of conservation and other values when submitting project proposals. This might be a useful model for the alternative energy regulatory program.

#### Adaptive Management

- The Bureau of Land Management incorporates adaptive management into its wind development program, which may provide a useful model.
- Any adaptive management program should include clear agreement on management objectives, the definition of success, performance standards, and monitoring.
- It is important to not only gather monitoring data but to analyze the data to determine what operational changes may be necessary and what environmental impacts are occurring.
- Concerned that the regulatory program may not include adoption of monitoring protocols and plans for enforceable mitigation to be implemented in the case of unanticipated adverse impacts, overseen by an independent third party.
- Concerned that MMS may not codify an adaptive management process in its regulations as standard operating procedures.

#### Other Issues/Concerns

- Concerned that National Historic Preservation Act, Section 106 requirements may not be accounted for in the regulatory program.
- Concerned that MMS may not consider human impacts when approving proposed projects.
- Concerned that MMS may not ensure that projects are properly decommissioned.
- Concerned that MMS and the New England Coastal states may not adopt consistent offshore cultural resource survey standards and management practices. There are currently inconsistencies in such survey elements as lane spacing, buffer zones, equipment requirements and reporting, among others. Reducing such inconsistencies can eliminate, or at least reduce, the regulatory uncertainty that exists in the development of the OCS and to provide regulators with better data on which to base significant resource protection/management decisions.

## Energy Profile

Meeting attendees described the current energy profile on the New England coast and discussed related policies, obstacles, and energy forecasts.

### Incentives/Policies:

- Legislation has been introduced into the Massachusetts legislature to increase the renewable portfolio standard to 15% by 2020. Similar legislation is pending in Rhode Island as well. New England's renewable energy resources, beyond solar and river hydropower, are rather limited, leaving the states to look to offshore renewable energy to add to the renewable energy portfolio.
- Many New England and Northeastern states have significant renewable portfolio standards that are state law, requiring utilities to purchase large quantities of renewable energy or face alternative compliance rates. This lies at odds with other public policy needs (for example, marine environment protection). Offshore wind has some of the least environmental impact compared with other clean energy alternatives available to New England.

### Forecasts/Planning:

- The U.S. Department of Energy (DOE) identifies offshore wind as the main renewable energy resource in the New England region. In order to meet RPS commitments and long-term commitments to reduction in greenhouse gases, offshore wind will need to be a primary contribution to the region's energy resources.
- The New England ISO predicts that there will be at least a 4000MW energy shortage by 2015, and potentially as much as a 6700MW shortage.
- Rhode Island will soon be announcing the results of a wind siting study which identified that the state can get 36% of the native load from wind power.
- Current rates of growth indicate that the baseload demand is growing at 1.3%/year, while peak demand is growing at 1.9%/year. Building new natural gas plants is not feasible for a number of reasons, which requires the region to fulfill its energy need with other energy sources.
- Offshore wind installations could result in massive new job growth in the energy industry.
- The New England grid operator warns that the region may not meet peak demand as soon as 2008. The region is almost 40% dependent upon natural gas. Offshore alternative energy sources will be critical for diversification and for meeting utility scale needs.
- The ISO New England website contains extensive information on regional energy profiles, projections for future load, demand for the region, and an overview of the region's renewable portfolio standards.
- Local state energy siting boards can provide good information on energy markets, as can findings from FERC and DOE.
- Analyses have shown that tidal energy is appropriate for southern New England and Maine.
- DOE identified 100,000MW of wind off the coast of the United States; 78% of the electricity consumed in this country is used in coastal states.

- There is significant, near-term potential for developing offshore wind energy in the Northeast. Modeling studies of wind resources along the east coast indicates large areas of strong winds (greater than 7.5 meters per second) within 50 nautical miles of shore. In the Northeast, offshore wind energy is an attractive option because more than half of the country's identified offshore wind potential is located off the New England and Mid-Atlantic coasts, where water depths generally deepen gradually with distance from shore. While most of the Northeast and Mid-Atlantic's development potential is in deep water (greater than 30 meters), the initial siting of offshore wind systems in relatively shallow waters will facilitate a transition to deeper waters further from shore as the technology advances.
- Facilitation of offshore wind energy siting is important for the Northeast states because these wind resources exist close to major urban load centers, where high energy costs prevail and opportunities for wind development on land are limited. Offshore wind energy development also is necessary for coastal states to meet their state renewable portfolio standard laws and policies (New Jersey and Massachusetts, in particular). Without significant offshore wind generation, it is unlikely that Northeast states will be able to meet RPS goals, due to the siting difficulties facing onshore renewable projects in the densely populated Northeast.

Other Issues/Concerns:

- Increasing education about renewable energy and ocean ecosystems will be an important part of this program.
- Transmission is constrained in our region. The power from Maine and New Hampshire cannot get to the load centers in the southern New England sectors. Offshore wind energy can provide local energy where it is needed.

**Present and Future Technology**

Meeting attendees described current and future ocean and wind energy technologies.

- Wind power developments tend to annually average approximately one third of their nameplate capacity.
- Options for storing surplus wind energy are being developed.
- Wave technology is maturing quickly and may be available commercially offshore sooner than wind technology.
- Wind energy and solar energy are paired well together; when you have wind power, you generally don't have solar, and vice-versa.
- The Massachusetts Institute of Technology (MIT) is developing floating platforms for offshore wind turbines that would allow for deepwater offshore wind stations that are not bottom-mounted.
- The Massachusetts Technology Collaborative (MTC) has an offshore wind energy collaborative group that is looking at the resources and challenges involved with the technology in order to get the offshore wind industry competitive with other forms of energy.
- There is currently a pilot project under way off Prince Edward Island that stores excess wind energy in the form of hydrogen.
- All offshore renewable energy technologies will require the capability to interface with the electric grid onshore.



- Many aspects of offshore renewable energy technologies, such as the underlying cables, mooring systems, and connections to the onshore energy grid, are currently well understood and will not require much additional research to determine their impacts.
- A deepwater offshore demonstration wind project off the coast of Scotland has been developed this year. This technology is promising, as deeper water is further from the coast and harbors and entails fewer conflicts with existing public uses of the OCS.
- Offshore systems are in the early stages of development, with new technologies emerging. Progress is needed in the following areas to advance wind technology: 1) development of design standards for offshore wind energy systems in deep water; 2) developing quantitative information about the geologic, oceanic, biological, and atmospheric marine environment to establish design criteria for offshore wind structures; 3) designing suitable support structure designs and bottom-attachment techniques to accommodate a range of site conditions found in the Northeast; and 4) addressing power transmission and grid interconnection issues to allow for delivery and injection of large amounts of wind generation into grids.

### **State and Local Regulations**

- The Massachusetts Environmental Policy Act Office (MEPA) acts as a repository for state review of projects.
- Concerned that MMS may not require that developers engage with state agencies to ensure compliance with both federal and state regulations. A regulatory program could require that a developer contact relevant state agencies and report to MMS regarding any potential conflicts and establish a regulatory timetable. Alternatively, the program could include a requirement that states designate a lead agency that would be responsible for coordinating all state agency input regarding offshore facilities.
- The formation of multi-agency evaluation teams to review potential projects could ease the regulatory process, allowing for consistent timelines, study plans, joint hearings, and consistent permitting processes wherever possible.
- The National Marine Sanctuaries Act protects National Marine Sanctuaries and provides authority over impacts to sanctuary resources.
- The Coastal Zone Management Act includes consistency requirements for state and federal regulations.
- Maine has created a bay management task force to resolve conflict between local and state interests. This approach may be a useful model for the alternative energy regulatory program.
- When Massachusetts recently certified two offshore Liquefied Natural Gas plants near Gloucester, the state regulatory office deemed that the impacts to the commercial fishing industry were significant enough that the state provided direct mitigation funds to a variety of sources. This model might be useful for the alternative energy regulatory program.
- The Coastal Energy Impact Program under the Coastal Zone Management Act worked to identify suitable areas and infrastructure onshore by delegating federal money to states and local communities to perform planning. This method might be useful for the alternative energy program on the OCS.

- A number of northeastern states have Energy Facility Siting Boards to make balanced decisions regarding proposed projects. Concerned that MMS may not defer to the adjudicatory findings of such siting boards.
- In Vermont the Quechee aesthetics test, which mandates that a proposed project must be in character with its surroundings, has been used for wind turbine siting. This essentially prohibits the possibility of installing wind turbines on ridges since they are never in character with the natural environment. This highlights the need for flexibility when using weighting criteria.
- Coastal zone regulation varies significantly among the coastal states. For example, New Jersey and Rhode Island have centralized authority for their coastal programs in one agency. In Massachusetts and many other states, on the other hand, coastal zone management programs fall under networks of parallel agencies, with various defined roles. (In Massachusetts, coastal zone management is tended by a variety of agencies, including the Department of Environmental Protection, Environmental Management, Fisheries, and Wildlife, Energy Facility Siting Board, etc.)
- Concerned that MMS may not work with coastal states upfront to identify lead state agencies responsible for partnering with MMS to coordinate review by all affected state agencies. One option would be to establish state-federal cooperative arrangements to provide a forum which the MMS and adjacent state governor(s) can use for planning, consultation, and coordination on concerns associated with the offering of the OCS for wind development leasing. A regulatory program could include development of memoranda of understanding with relevant federal and state regulatory agencies to incorporate their regulatory and permitting requirements into project-specific environmental impact statements, and to hold joint hearings and require joint study plans.
- Concerned that MMS may not establish multi-agency evaluation teams that include key contact individuals from relevant state permitting agencies to coordinate the regulatory requirements of all affected agencies and foster inter-agency cooperation.
- Concerned that MMS may not foster, with other cooperating state and local agencies, the opportunities for front-loading permitting review and approval for areas identified as suitable for offshore facility siting through the EIS process.

### **Conclusion and Next Steps**

Maureen Bornholdt thanked the attendees for participating in the session. Maureen encouraged the participants to contact MMS with further questions or input. The regional summary and attendance lists from the two Boston, Massachusetts meetings will be posted on the MMS website.

## **Appendix 1: Additional Suggested Stakeholders**

### Industry, Non-Governmental Organizations, and Local Stakeholders

- Associated Industries of Massachusetts
- Boston Metropolitan Area Planning Council
- Boston Shipping Association
- Central Massachusetts Regional Planning Commission
- Commercial Shipping Interests
- Environmental Business Council of New England
- Former Governor Mitt Romney
- Greenpeace
- Maritime Trades Council
- Martha's Vineyard Commission
- Merrimack Valley Planning Commission
- Montachusets Regional Planning Commission
- Natural Resources Defense Council
- Northern Middlesex Planning Commission
- Northwest Atlantic Marine Alliance
- Old Colony Planning Commission
- Penobscot Bay Alliance
- Penobscot East Resource Center
- Save Passamaquoddy Bay
- University of Massachusetts Renewable Energy Research Laboratory
- University of Massachusetts School for Marine Science and Technology
- We Take Care of Our Land

### Governmental Stakeholders

- Aroostook Band of Micmac
- Cape Cod National Seashore
- Houlton Band of Maliseet
- Maine Island Fish and Wildlife Department
- Maine Office of Energy Independence and Security
- Mashantucket Pequot Tribal Nation
- Massachusetts Board of Underwater Archaeological Resources
- Massachusetts Environmental Policy Act Office
- Massachusetts Highway Department
- Massachusetts Historical Commission
- Mohegan Tribe of Connecticut
- Narragansett Indian Tribe
- New England Fishery Management Council
- Passamaquoddy Indian Township
- Passamaquoddy Pleasant Point
- Penobscot Tribal Nation
- Regional Independent System Operators
- Rhode Island Coastal Resources Management Council
- Rhode Island Department of Environmental Management
- Rhode Island Office of Energy Resources

- Senator Robert O'Leary
- Stockbridge-Munsee Band of Mohicans
- U.S. Air Force
- U.S. Coast Guard Atlantic Area
- U.S. Coast Guard Maintenance and Logistics Command, Atlantic
- U.S. Coast Guard Sector Southeastern New England
- U.S. Department of Interior, Bureau of Indian Affairs
- U.S. Geological Survey