

**Minerals Management Service  
Regional Stakeholder Meetings  
West Long Branch, New Jersey  
January 23-24, 2007  
Meeting Summary**

**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 the New Jersey area, 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

- Concerned that MMS may not revisit its final regulations as more data is gathered through installation of offshore alternative energy facilities.
- Concerned that MMS may not consult the National Academy of Sciences report that examines the potential of developing wind, solar, and ocean energy on Federal lands, authorized through Section 1833 of the Energy Policy Act of 2005.
- Concerned that MMS may not clearly define what alternate uses may occur on the OCS.
- Concerned that the regulatory program may not plan for decommissioning of alternative energy structures installed on the OCS.

- Concerned that MMS may not look at the averted costs and damages of installing alternative energy projects instead of fossil fuel projects.
- Concerned that there may not be necessary funding to police the areas surrounding projects or buffer zones that may be created.
- Concerned that MMS will continue to pursue taxpayer-subsidized credits to fund new alternative energy facilities on the OCS.
- Concerned that MMS may not provide clear guidelines on how it will deal with competing project applications for a site on the OCS.
- Concerned that MMS is not accepting project applications while developing the regulatory program. Concerned that MMS may not accept applications even after the Draft Programmatic Environmental Impact Statement is released.
- Concerned that litigation and economic needs, such as those of the insurance industry, may hamper development of alternative energy development on the OCS.
- Concerned that MMS may not allow the installation of a test offshore wind energy project as a model for regulation of alternative energy on the OCS.
- Concerned that MMS may not continue to consult with all interested and affected stakeholders during creation of this regulatory program.
- Concerned that MMS may develop a regulatory program that prioritizes one technology over another.
- Concerned that the MMS regulatory program may not include a comprehensive plan for energy development on the OCS.
- The identification of transmission constraints by MMS would assist developers in proposing alternative energy projects for the OCS.
- Concerned that MMS may not provide guidelines on how to develop simulations of proposed project aesthetics.
- Concerned that MMS may not evaluate successful regulations in European countries and elsewhere that support offshore alternative energy development for their potential use in the United States.
- Concerned that MMS may not provide a list of best management practices or standards for alternative technologies.
- Concerned that MMS may not consider alternate types of energy when reviewing project alternatives.
- The New Jersey Office of Clean Energy performed a qualitative analysis comparing the costs and benefits of various alternative energy technologies. The New York State Energy Research and Development Authority (NYSERDA) currently has a request for proposals out for a head to head analysis of different energy types. These documents may be useful for MMS in developing the regulatory program.
- Concerned that MMS may not develop a regional PEIS. The New Jersey Office of Clean Energy supports the development of a regional document to assist with regional planning.
- Workshops between MMS and other government organizations to exchange information on the development of rules, guidelines and regulations would be mutually beneficial. Regional Taskforces, involving these same agencies and various stakeholders with input from the general public, established early on in the decision making and project review process, would ensure that all concerns are addressed. Tracts to be included or excluded for lease sale could be identified by the taskforce. This coordinated approach would benefit the

permittees as information deficiencies and fatal flaws could be identified and addressed during initial project phases.

- Concerned that MMS may not require a revenue sharing process, similar perhaps to that already established for oil and gas production activities, guaranteeing neighboring and affected states a percentage of receipts.
- The Delaware economy is based heavily on tourist revenue. Concerned that potential disruptions to this revenue stream may not be weighted heavily in the OCS lease sale process. States must be compensated accordingly.

#### Avian Impacts

- Concerned about potential impacts to waterfowl, shorebird, and seabird movement patterns along the Mid-Atlantic and New England OCS.
- The U.S. Fish and Wildlife service has developed onshore wind power guidelines that recommend at least two years of bird and bad radar monitoring studies prior to project construction.
- Radar monitoring may not accurately predict what will happen when turbines are installed. Even in busy avian migration corridors, the birds may succeed in completely avoiding contact with the turbines once they are constructed.
- Recent studies from the Horns Rev wind farm in Denmark indicated that there were few avian impacts from the offshore wind project.
- In order to perform avian studies in the offshore environment, developers must build a multi-million dollar stable platform to conduct the observations.
- Migratory bird pathways merit extreme caution with respect to siting and operation of wind facilities.

#### Other Environmental Impacts and Mitigation

- Concerned that MMS may not balance the protection of ocean resources and the need to develop clean sources of energy.
- Concerned that companies placing facilities on the OCS may not be required to be bonded for any environmental impacts occurring as a result of construction, accidents, or acts of nature.
- Concerned that MMS may not consult with environmental experts in other federal and state agencies.
- Threatened and endangered species in the New Jersey area will need protection under the Endangered Species Act.
- Concerned that MMS may not examine the cumulative impacts of proposed projects.
- Concerned about potential conflicts with other sea space uses such as already identified sand resources that will be required for mitigation of beaches, wetlands, and associated ecosystems.
- Concerned that MMS may not designate environmental windows for construction and removal phases to take into consideration the migration patterns of at-risk species such as the Atlantic Right Whale.
- Concerned that MMS may not require the mitigation for unavoidable impacts and minimization and avoidance of environmental impacts and during all phases of the project in coordination with appropriate agencies.
- Concerned that MMS may not consider noise, either from construction or operation, a potential negative impact to marine mammals and other noise-sensitive marine life.

- Potential changes to sediment transport and hydrodynamics and resultant changes to wave energy, coastal erosion, and benthic communities deserve careful consideration.

### Environmental Studies

- It will be important to determine what baseline information is available and what baseline information still needs to be gathered.
- Some of the Danish environmental studies were subsidized by the government as part of a specific national initiative to develop offshore wind energy.
- Extensive preconstruction studies will be useful to determine appropriate sites for alternative energy development on the OCS.

### Additional Impacts

- Concerned that the development of the OCS for alternative energy uses may affect fishing access.
- Concerned that MMS may ban diving near shipwrecks or other sites if alternative energy projects are sited near them.
- Concerned that MMS may create buffer zones around projects that exclude shipping and commercial and recreational fishing.
- Concerned that state and local tourism industries may be affected by the development of alternative energy on the OCS.
- Concerned that large arrays of energy facilities will have cumulative impacts on the commercial fishing industry.
- The fishing industry will likely have concerns about the installation of transmission cables and the effects on dredging, especially for shellfish. The U.S. Army Corps and other agencies have previously spent time working with the fishing industry to ensure that cables would be buried to a sufficient depth. The New Jersey Department of Environmental Protection adopted rules for telecommunications cables (N.J.A.C. 7:7E-4.20).
- Coastal residents and tourists will request mitigation for the alteration of historic viewsheds.
- Navigation is a huge concern in Delaware Bay and the approach channels since it is the largest port on the east coast for oil. Additionally, there is concern about sand resources and effects on bats.
- Concerned about impacts to National Parks and National Seashores from development of alternative energy projects on the OCS, particularly regarding aesthetic values and subsequent potential adverse impacts on visitor use patterns, visitor satisfaction, and administrative activities.

### **Energy Profile**

Meeting attendees described the current energy profile for the New Jersey coastal region and discussed related policies, obstacles, and energy forecasts.

### Incentives/Policies

- New Jersey and Delaware are both involved in the Regional Greenhouse Gas Initiative (RGGI) that caps carbon dioxide emissions. This will cause a greater demand for power from renewable sources. There are additional legislative proposals in New Jersey to cap carbon dioxide emissions from all sources.

- RGGI will provide a cap on Carbon Dioxide emissions from Delaware's power plants. The credits that will be generated in this effort may provide a source of funding for energy efficiency initiatives in the State. This initiative is set to take effect in 2009.
- Delaware recently mandated its largest utility, Delmarva, to issue a Request for Proposals for new power. One of the bidders is proposing up to 600 MW of wind generation from approximately 200 wind turbines placed 10-12 nautical miles off the coast of Delaware. Information on this can be found on the Delaware Public Service Commission website.
- Delaware recently approved the Energy Efficiency Financial Incentives Act of 2006 that appropriated eight million dollars to the Department of Natural Resources and Environmental Control for the development of an energy efficiency program. The program, branded the Delaware *Energy Answers Program*, was designed to promote the use of energy efficient technologies by Delaware residential and nonresidential (commercial) customers. The program was divided into four markets, targeting home appliances, home performance, businesses, and a lightbulb giveaway.
- Delaware has a Green Energy Fund that supports its Green Energy Endowment Program, Technology Demonstration Program, and Research and Development Program. As of January 2007, the Research and Development and Technology Demonstration Programs have funded research into photovoltaic design, biodiesel production, fuel cell manufacturing, ethanol production, and offshore wind potential. The Fund disbursed over \$2.5 million in 2006 towards these efforts and other Green Energy Endowment Program efforts.

#### Forecasts/Planning

- The University of Delaware will soon release a report describing the extent of wind resources available off the mid-Atlantic coast of the country.
- An interim report on public opinion in Delaware indicates that 78% of the public is in favor of the creation of an offshore wind farm six miles from the coast, and 4% are opposed to such a development. When asked about whether they would prefer offshore wind to coal or natural gas energy projects, 95% of Delaware citizens polled indicated they supported offshore wind.
- New Jersey conducted an offshore wind survey of public opinion (including both tourists and residents) in Ocean, Monmouth, Atlantic, and Cape May Counties, to determine the reaction to development of wind turbine facilities three, six, twelve, and twenty miles offshore. Ninety percent of respondents said that they had no objection or would like to see wind energy developments twelve or twenty miles offshore. Sixty percent said they had no objection or would like to see wind energy developments three miles offshore. This data is available on the New Jersey Office of Clean Energy website.
- New Jersey is a growing state with very high energy needs. Between 1994 and 2004 the state's energy needs went up by 28%. Between 2005 and 2020, New Jersey's energy needs are expected to jump by another 29% even though New Jersey has some of the best energy efficiency programs in the country. New Jersey already gets nearly 20% of its power from out of state, mostly from Pennsylvania. New Jersey may soon close the Oyster Creek nuclear power plant when its license expires, and some of the state's coal-fired power plants may also close. New Jersey has a great need for energy from renewable sources.

Governor Corzine set a goal to reduce state energy demand by 20% by 2020. Additionally, New Jersey has a Renewable Portfolio Standard of 20% by 2020. Offshore wind can, and should, be a significant part of meeting this energy need.

- New Jersey has a great potential for solar and offshore wind energy but not very much potential for onshore wind projects. Delaware also does not have much capacity for onshore wind development.
- Atlantic County has wind, solar, methane gas, and geothermal power facilities.
- New Jersey has large substations on the southeastern coast that could handle the addition of cables from offshore energy facilities. In the northern part of New Jersey most of the power is generated inland and the transmission lines become smaller towards the coast.
- PJM Interconnection will have information on transmission constraints in the New Jersey region.
- The BL England power plant in New Jersey may be closed, creating an additional need for transmission upgrades in the southeastern part of the state.
- The New Jersey Wind Working Group is looking at small onshore wind resources across the state and is examining integrated wind technologies.
- New Jersey relies heavily on nuclear power (50-55%) and coal (30%). During an average year, New Jersey imports 15-20% of its electricity, and the state has been a net importer since the mid-1980's. The state has permitted two coal-burning power plants since the mid-1990's as well as a number of natural gas plants. New Jersey currently gets about 4.5% of its power from renewable sources, mainly from municipal solid waste incinerators (resource recovery), with the remainder from landfill gas. The solar program is growing, and the state is expected to hit its goal of having 2% of its energy from solar power by 2020. New Jersey is currently developing an energy master plan to look at all energy sources including heating, production, industrial processing, and electricity.
- Several of New Jersey's old coal-burning power plants in Bergen and Hudson Counties have been retrofitted with mercury and nitrogen oxide controls but are not performing economically and may be shut down by PSE&G. During the summer months there are days of concern for reliability capacity around the coast. New Jersey's total electricity load is about 80,000GWh, expected to increase to 100,000GWh by 2020.
- There is a potential for about 26,000MW of wind energy off the New Jersey shore between 20 and 127 miles. About ten percent of that capacity is expected to be economically feasible, so New Jersey might obtain about 2000MW of offshore wind energy.
- In order to reach the state's 20% RPS targets by 2020, New Jersey may use renewable energy from elsewhere in the PJM grid through the use of renewable energy credits. Since Pennsylvania, Delaware, Washington DC, Maryland, New York, Connecticut, and Massachusetts all have RPS requirements there will be heavy demand for renewable power facilities to be installed in the region.
- New Jersey will likely have transmission line constraints in the near future. The AEP transmission corridor that comes from West Virginia and Virginia to southern New Jersey may have to be doubled or tripled in transmission capacity to sustain demand.
- The southern part of Delaware is constrained in terms of electrical infrastructure. There is only one gas line that was recently permitted in the southern part of the

state and it does not travel all the way through the state. Delaware is a net importer of electricity.

- Delaware has not sited a power plant since 1972 since there is a prohibition on heavy industrial development on the Delaware coastal strip.
- Studies have shown that Delaware's on-shore wind resources are poor; however, offshore resources appear to be more than adequate given today's wind turbine technologies. As technologies progress, less favorable wind resources will become more cost competitive and stresses will occur on both land and offshore locations. Other than wind, no other alternative or renewable energy technologies have been considered for offshore Delaware. However, tidal power is presumed to be another possible alternative.
- Delaware's energy sources are 13% coal, 21% natural gas, 50% petroleum, 15% imported electricity, and 1% other sources.
- Energy consumption in Delaware is expected to increase at a rate of 2-3% per year. Additional capacity will be needed to meet this increase especially in the southern part of the State that is rapidly growing in both the residential and industrial areas. Delmarva Power has plans to expand their transmission capability over the next 5 years by building new transmission lines that would cross the Chesapeake Bay and provide additional capacity for Maryland's Eastern Shore and southern Delaware. Chesapeake Utilities also has a plan to build a new natural gas pipeline from Cove Point, MD across the Chesapeake Bay that would provide additional and much needed new natural gas to the Eastern Shore and Delaware. If both of these projects are realized, Delaware's energy reliability and capacity would be greatly enhanced.
- According to the Delaware Energy Task Force's Final Report in September 2003, the business-as-usual forecasts indicate the following increases in energy consumption by 2010: an 18.5% growth in electricity consumption, an 18% growth in peak electricity demand, an 8.8% growth in natural gas consumption, a 6.1% increase in total fuel oil consumption for residential, commercial, and industrial use, and a 23% increase in gasoline and other motor fuel consumption.

#### Other Issues/Concerns

- The Jersey-Atlantic Wind Farm has been favored by those who see it. This shows that a small scale project may be the key to gaining public acceptance for this sort of technology.
- Fort Monmouth has a state-of-the-art energy facility that is looking at different ways to manage energy, utilize energy, and develop new energy technologies.
- New Jersey's Blue Ribbon Panel deferred some decisions on renewable energy development to the energy master plan currently being developed. The Blue Ribbon Panel was established due to the state's fear that project applications were being submitted before permitting regulations were available for certain renewable energy technologies. The governor's office wanted to understand the costs and benefits related to wind power within the range of other technologies. The Panel operated for fifteen months and produced a preliminary report identifying data gaps in the current evaluation of offshore wind and a final report was sent to Governor Corzine in April 2006.
- A Wind Working Group has been established in New Jersey between the Department of Environmental Protection, Board of Public Utilities and Commerce, Economic Growth and Tourism Commission to conduct a feasibility

baseline study to determine how to proceed with wind power. The Blue Ribbon Panel recommended using a public-private partnership to develop the feasibility baseline study.

### **Present and Future Technology**

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

- Winergy Power is currently developing wind energy platforms that can be installed up to 150 feet in the ocean and can withstand up to class three hurricanes.
- Floating platforms for wind turbines will not likely be fully developed until at least four to six years from now.
- Cleveland State University has a new wind turbine project that combines a cylindrical wind tower with wireless internet service.
- Transmission cables in the ocean cost approximately \$5.5 to \$6 million per mile. To create a project ten to fifteen miles offshore and connect it to onshore energy facilities may cost in excess of \$230 million.
- The creation of hydrogen from wind energy is a process not nearly ready for development.
- One significant barrier to development of further onshore wind in New Jersey is the fact that 566 municipalities have laws against the erection of towers. New Jersey is proposing, in addition to drafting a model ordinance and providing more education and outreach, that there be greater adoption of a vertical axis wind turbine in order to overcome aesthetic issues and avian impacts. This technology is not as extensively tested as the traditional horizontal axis turbine as far as efficiency and capacity factors, but it may be developed in the near term to overcome the zoning and code barriers in place.
- The ocean power wave generator, PowerBuoy (developed by Ocean Power Technology) is near commercialization. Ocean Power Technology has entered into contracts with the U.S. Navy for upcoming wave energy projects.

### **State and Local Regulations**

Meeting attendees identified applicable state and local regulations that MMS will need to be aware of when developing the Alternative Energy and Alternate Use Program. Additionally, attendees discussed associated permitting issues.

- The New Jersey Blue Ribbon Panel recommended that the state conduct research to determine an appropriate site for an offshore wind test project, collect baseline data, and begin construction of the test facility. The Panel additionally recommended setting state standards and guidelines on offshore energy development based on the experiences gained through establishment of the test wind energy facility.
- Concerned that the MMS regulatory program may not allow for easy coordination with state and local regulations.
- The Outer Continental Shelf Lands Act may be a good model for integrating state and federal laws.
- It may be useful for MMS to enter into cooperate agreements with states to set up a regulatory framework, incorporating the state requirements into the federal requirements.

- The University of Delaware is currently making recommendations on a regulatory regime for offshore wind which will likely be available in a report in six to eight months.
- New Jersey has been very active in opposing any energy activities that would impair the progress made in improving and protecting the marine environment in the New York/New Jersey region.
- Delaware has a state Coastal Zone Act in addition to the Delaware Coastal Management Program. The Coastal Zone Act prohibits any new heavy industry in the state coastal strip. Offshore developments connecting to the Delaware shore would require a state subaqueous lands lease/permit.
- New Jersey has a Waterfront Development Law governing tidal waters, a Tidelands Conveyance license or lease for state waters, and the Coastal Area Facility Review Act (CAFRA) affecting coastal lands. Additionally, the Freshwater Wetland Protection Act and Wetlands Act of 1970 may affect offshore renewable energy developments. The New Jersey Department of Environmental Protection, Division of Land Use Regulation coordinates these laws and permits.
- The New Jersey Department of Environmental Protection Office of Pollution, Prevention, and Permit Coordination would likely be the lead agency under NEPA.
- The Delaware Public Service Commission decides whether to entertain a project application and would likely coordinate the necessary environmental review.
- For energy development in New Jersey a developer would be required to get approval from PJM and a state or federal permit for interconnection and transmission line development, depending on where the project is sited.
- New Jersey Executive Order 215 requires an additional level of review for projects that receive state funding.
- The Clean Water Act Section 404 authority, under the U.S. Army Corps' jurisdiction, is administered by individual states.

## Appendix 1: Additional Suggested Stakeholders

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

- American Wind Energy Association
- AT&T
- Atlantic Energy
- Center for Inland Bays
- Citizens for a Better Sussex
- Citizens for Clean Power
- Delaware Audubon
- Delaware Audubon Society
- Delaware Nature Society
- Delaware Riverkeeper
- Delaware Sierra Club
- Delaware Surfrider Foundation
- Delmarva Power
- Environmental Defense
- Green Delaware
- Hudson River Sloop Clearwater
- League of Women Voters, Delaware Chapter
- Mid-Atlantic Solar Energy Industries Association (SEIA)
- Monmouth County Friends of Clearwater
- New Jersey Sea Grant Program
- New Jersey Telecommunications Cable Task Force
- New Jersey utilities authorities
- New York/New Jersey Baykeeper
- North American Submarine Cable Association
- NRG Energy Inc.
- Ocean County League of Women Voters
- Offshore Wind Collaborative
- Pinelands Preservation Alliance
- Power companies
- PPJ
- Public Service Enterprise Group (PSEG)
- Raritan Baykeepers
- Recreational fishing associations
- Regional ocean observing systems
- Regulated utilities
- Telecommunications industry
- The Global Ocean Observing System
- The Nature Conservancy Global Climate Change Initiative
- The Nature Conservancy Global Marine Initiative Team
- U.S. Green Building Council, New Jersey Chapter

### Government Stakeholders

- Barnegat Bay National Estuary Program
- Bombay Hook National Wildlife Refuge
- Cape May National Wildlife Refuge
- DC Public Service Commission
- Delaware Public Service Commission
- Delaware State Historic Preservation Office
- Edwin B. Forsythe National Wildlife Refuge
- Federal Aviation Administration
- Federally recognized tribes
- Fort Dix
- Lakehurst Naval Air Station
- Maryland Department of Natural Resources
- Maryland Energy Administration
- Maryland Public Service Commission
- Maryland State Agencies
- McGuire Air Force Base
- Mid-Atlantic Fishery Management Council
- New England Fishery Management Council
- New Jersey Division of Fish and Wildlife, Endangered and Nongame Species Program
- New Jersey Historic Preservation Office
- New York/New Jersey Harbor Estuary Program
- New Jersey Pinelands Commission
- NOAA Coastal Services Center Coastal Ocean Observing System
- NOAA National Ocean Service
- NOAA National Oceanographic Data Center
- NOAA Office of Marine and Aviation Operations
- Prime Hook National Wildlife Refuge
- South Atlantic Fishery Management Council
- U.S. Department of Homeland Security
- U.S. Environmental Protection Agency Regions Two and Three
- U.S. Navy
- Virginia State Agencies