US Offshore Wind Collaborative

Comments to the Department of Energy
Request for Information DE-PS36-09GO39008
3 April 2009

The US Offshore Wind Collaborative (USOWC) appreciates this opportunity to comment on the Department of Energy's (DOE) Request for Information, DE-PS36-09GO39008. The USOWC is a forum for states, academic institutions, clean energy advocates, industry and environmental interests to jointly address the technical, policy, environmental and economic issues necessary to catalyze the sustainable development of wind energy resources on the waters of the United States. An ad-hoc steering committee[1] is managing the formal launch of the USOWC, building on a foundation established through prior collaboration between Massachusetts Technology Collaborative (MTC), the US Department of Energy (DOE), and GE Wind Energy. This initial effort produced **A Framework for Offshore Wind Energy Development in the United States (2005)** (available at http://www.usowc.org/history.html).

The USOWC is greatly encouraged by DOE's renewed interest in offshore wind. Our comments focus on the following specific topics highlighted in the *Offshore Wind Siting Strategies section* of the *20% Wind Energy by 2030 Workshop Proceedings,* and incorporate perspectives gained through our discussions with the NE and Mid Atlantic states. We also fully endorse the recommendations submitted by the AWEA Offshore Wind Working Group regarding specific technology R & D priorities. Our intent is to highlight the opportunity and necessity for interagency and intergovernmental integration of research activities in order to leverage financial investment, expertise and efficiencies.

Federal and State Collaboration

Since September, the USOWC has been convening energy and environmental officials from New England and Mid-Atlantic states actively pursuing offshore wind energy development, in order to identify issues of mutual concern requiring regional attention, as the Minerals Management Service (MMS) prepares to issue the final rule for Alternative Energy Development on the Outer Continental Shelf (OCS).

The offshore wind resource along the east coast is this regions' most abundant source of renewable energy. These individual states are taking assertive action to plan for, support and attract wind development in state and adjacent federal waters by engaging in ocean planning, with renewable energy as a major focus, and/or partnering with developers to site projects. Significant activity is being undertaken by Great Lakes states as well, under a different regulatory structure, with the Army Corps of Engineers (ACOE) as the lead federal regulatory agency.

[1] MA Technology Collaborative, MA Executive Office of Energy & Environmental Affairs, Clean Energy States Alliance, Great Lakes Wind Collaborative, MIT Energy Lab, MA Audubon and the American Wind Energy Association (AWEA), Union of Concerned Scientists

It is clear that cooperative engagement among the states, and between the states and federal agency partners including the DOE, is essential to meeting our urgent renewable energy and environmental objectives, in particular the targets laid out in DOE report 20% by 2030, which includes more than 50 GW from offshore wind. The *Offshore Wind Technologies and Siting Strategies* section of the *Proceedings* referenced above specifically note MMS and the ACOE , along with DOE, as essential federal agency partners; we would add the various units of the National Oceanic and Atmospheric Administration (NOAA) to that list, as a key source of data, marine research and technology expertise, along with the US Fish and Wildlife Service (USFWS) and the US Geological Survey (USGS). These agencies conduct R&D on topics fundamental to siting offshore wind and other marine renewable energy projects; coordinating with these efforts can add significant value and efficiencies to DOE's investments, for example in analyzing the environmental constraints and interactions of new support structure designs for offshore wind turbines. To facilitate this cross-agency collaboration in support of achieving our national renewable energy targets, DOE should establish an *inter-agency offshore renewable energy R&D task force* to share data and develop new avenues for mutually beneficial collaboration.

Data and Natural Resource Mapping

There are multiple resource data layers - including highly migratory fish, marine mammals and avian species - necessary to inform offshore wind siting decisions, that are more appropriately collected and better understood on a regional, rather than a project - or even state-by-state scale. Use of data collected with public support, and maintained in the public domain, has been an important contributor to growth of the offshore wind industry in the European Union.

The interagency task force suggested above should identify priorities for regional environmental data collection to reduce the financial burden on offshore wind developers, standardize data collection methods, avoid unnecessarily duplicative studies and create an ecosystem-level understanding of our offshore environment to support responsible and efficient siting.

Individual states are also investing millions of dollars in surveying their near shore and adjacent federal waters to identify promising locations for offshore wind development. Productive federal-state-private sector partnerships are already emerging in the area of data collection and management, for example, New Jersey and Rhode Island along with their offshore wind development partners are working with NOAA's Integrated Ocean Observing System (IOOS) to standardize and broaden the utility of met tower data collection; similarly NOAA's Coastal Services Center and MMS are collaborating to develop a common, accessible GIS data management platform, referred to as the *multi-purpose marine cadastre*, which has tremendous potential to support efficient renewable energy project siting. In order to meet the urgent timelines for offshore wind development committed to by states and reflected in the *20% by 2030* report, DOE should actively engage with both federal and state partners to leverage cross-agency resources, expertise and efficiencies.

Transmission Issues

The USOWC strongly supports the call for regional offshore wind grid integration studies, conducted in close cooperation with the states, regional RTOs and utilities, particularly in the New England and Mid-Atlantic region where states are taking the lead in pursuing offshore

wind development. Such studies should consider basic constraints and essential upgrades to accommodate offshore renewable wind production at a level adequate to meet our state and national targets, as well as novel approaches, such as the development of an offshore grid similar to the infrastructure under development in the EU.

The studies should also aim to shed light on how the anticipated development of the east coast offshore wind resources should inform plans for expanding/improving the nation's electric transmission system. While many of the richest land-based wind resources exist in remote rural areas far from population/load centers, some of the waters off the U.S. east coast host some of the most robust wind energy resources in the world. These are in close proximity to major load centers. In fact, according to the National Renewable Energy Laboratory the nation's 28 coastal states use 78 percent of the energy generated. An analysis of the comparative costs of developing the offshore wind resource with those associated with a cross-country transmission corridor should be undertaken. The study should consider how offshore wind farms could potentially benefit from the existence of a Midwest-to-East Coast transmission corridor (e.g. by taking advantage of the different wind regimes across the country to balance variability and availability of wind introduced into the system).

Thank you again for opportunity to comment; we look forward to working with DOE to advance a sustainable offshore wind industry in the United States.

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