



**Statement of
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**Before the
U.S. House of Representatives Committee on Natural Resources'
Subcommittee on Energy and Minerals Resources Oversight Hearing:
"American Energy Initiative: Identifying Roadblocks to Wind and Solar Energy on Public Lands and
Waters, Part II - The Wind and Solar Industry Perspective"**

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Introduction

Mr. Chairman and Members of the Committee,

Thank you for the opportunity to present testimony to you today on the topic: "American Energy Initiative: Identifying Roadblocks to Wind and Solar Energy on Public Lands and Waters, Part II - The Wind and Solar Industry Perspective". My name is Jim Lanard, President of the Offshore Wind Development Coalition. The Offshore Wind Development Coalition represents offshore wind developers, service providers to the industry including turbine manufacturers, cable manufacturers, submarine cable installers, other supply chain businesses, offshore submarine transmission providers, environmental consulting firms, and law firms. Our founders include seven offshore wind developers and the American Wind Energy Association (AWEA) has a seat on our Board of Directors.

Technology to generate electricity from offshore wind farms is not new and has a proven track record. In fact, the first modern day offshore wind farm became operational in 1991 off the coast of Denmark. There are now more than 40 offshore wind farms operating in European waters for a total of 2,396 MWs of power generation. There are sixteen more projects under construction, for an additional 3,972 MWs of installed capacity.

And let's not forget China, which is currently the world's largest generator of wind energy and is quickly becoming a world leader in offshore wind, too. China has clearly demonstrated that it values wind energy. For the year 2010, 46% of the world's newly installed wind energy capacity was in China, while the US accounted for 14.3% of the world's new wind energy facilities. Regarding offshore wind, China now has 102 MWs of offshore wind operating and 2,300 MWs of offshore wind is under construction. China's wind energy programs are supporting that country's efforts to achieve energy security, economic development and emission reductions.

Yet in the United States, no offshore wind farms have been built. But this will soon change. Change, in fact, began here in the US in 2005, when Congress passed and President George W. Bush signed into law the Energy Policy Act of 2005 (EPAct 2005). EPAct 2005 gave the Secretary of the US Department of the Interior leasing and permitting jurisdiction for renewable energy projects proposed for the Outer Continental Shelf (OCS).

Background

While the efficacy of offshore wind energy technology has been demonstrated in Europe, this technology and regulation of it is new to the United States. Federal and state regulators have had to draft regulations and learn about all aspects of developing, constructing, operating and decommissioning offshore wind farms. And they have had to consider more than 20 federal laws and Executive Orders that apply to offshore wind farms. This has been a steep learning curve for all parties, admirably begun under the prior administration and continuing at an even faster pace now. It is hard to imagine that anyone associated with offshore wind doubts the commitment and efforts that federal and state officials are continuing to make to establish this industry and its potential to employ tens of thousands of people in good paying jobs. We applaud President Obama, US DOI Secretary Ken Salazar, US DOE Secretary Steven Chu, and their staffs for their leadership on the continuing development of the offshore wind industry.

Momentum in the development of offshore wind is evidenced by the surge of interest demonstrated by developers. What began with Cape Wind's leading role a decade ago, when it first proposed an offshore wind farm for Massachusetts, has now turned into a very robust offshore wind industry. For example, state initiatives in Delaware, New Jersey and Rhode Island provided offshore wind developers opportunities to propose projects in the Atlantic Ocean. In 2006, Delaware held a competitive process to select a generation source to be located in-state. One offshore wind developer competed against two other power sources – one a gas-fired power plant and one a coal gasification plant. The offshore wind developer won that competition. Then, in 2007 and 2008, two states, New Jersey and Rhode Island, held competitions just for offshore wind developers. Five offshore wind developers bid in the New Jersey competition and then seven competed in Rhode Island.

And, with the advent of the federal government's OCS leasing program, we have seen even more interest in developing offshore wind. In 2010, eight offshore wind developers bid to lease land on the OCS off the coast of Maryland. Earlier this year, ten offshore wind developers bid in the leasing process for federal waters off of Massachusetts and, just next month in June 2011, it is expected that 20 or more offshore wind developers will respond to the federal government's Call for Nominations on the OCS off of New Jersey's coast.

This rapidly increasing level of interest is a significant signal that the offshore wind industry and the great benefits it can offer to our country is about to become a reality. Offshore wind provides clean, renewable energy that will support US efforts to reduce reliance on foreign energy sources and increase our country's quest for energy independence. In a sentence: Offshore wind can – and will – play a significant role to help the United States meet our national and energy security goals.

Job Creation and Manufacturing

Moreover, offshore wind has the potential to become one of our nation's newest manufacturing sectors and could employ tens of thousands of workers in good paying, clean tech jobs. In Europe, the European Wind Energy Association projects that “by 2030, more than 375,000 people should be employed directly in the sector – 160,000 onshore and 215,000 offshore.” (Emphasis added.) And President Obama, in an Earth Day speech on April 22, 2009 said,

“It's estimated that if we fully pursue our potential for wind energy on land and offshore, wind can generate as much as 20% of our electricity by 2030 and create a quarter-million jobs in the process – 250,000 jobs in the process, jobs that pay well and provide good benefits. It's a win-win: It's good for the environment; it's great for the economy.”

Some commentators have compared the jobs and manufacturing history of the development of the land-based wind industry with what we can expect from the offshore sector. We think US-based jobs and manufacturing for offshore wind farms will develop quicker than what has occurred in the land-based wind industry.

As background, it should be noted that domestic content of turbine-related materials for land-based wind farms, in their early years, was low. Prior to 2005, less than 25% of land-based turbines (based on cost) were manufactured in the U.S. Five years later that percentage has doubled so that in 2010, domestic content of U.S.-deployed turbines has reached 50%. According to the AWEA, more than 75,000 people work in the land-based wind industry and there are over 400 wind-related manufacturing plants in 43 states that support the manufacture of the 8,000 components of a typical wind turbine.

Offshore wind developers and state economic development officials expect – and the latter likely will demand – higher domestic content much earlier in the development cycle for the offshore wind industry. One driving force for domestic content of offshore wind equipment is that the cost of installing offshore wind farms is considerably higher than for land-based wind farms. Hence, there are sound public policy arguments for the case that offshore wind developers and their state counterparts should be able to demonstrate economic benefits – job creation and establishment of manufacturing centers – early in the development stage of this new industry. These economic benefits can thus offset the higher costs for installation of offshore wind farms. And those benefits must be enjoyed by residents in states where offshore wind power is being sold.

The question we are often asked is whether offshore wind can achieve the economies of scale necessary to support state and federal policies that promote the establishment of this multi-billion dollar industry. The answer is yes, economies of scale can be achieved for offshore wind farms. First, the use of larger turbines will result in a reduction of the number of foundations that need to be installed in the ocean while at the same time increasing per unit energy output. Second, developers have begun to propose larger wind farms; i.e., more turbines per wind farm. Several offshore wind developers planning to compete for the right to sell power in New Jersey have reported that they plan to propose wind farms scaled at 1,100 MWs each – and that 5- and 6-MW turbines are being considered. These wind farms are likely to cost more than three billion dollars (\$3,000,000,000) each, which represents significant manufacturing and job creation potential for New Jersey and other states that embrace this new-to-the-US economic engine.

Offshore wind is a bipartisan issue. In addition to the Energy Policy Act of 2005 that President Bush signed, New Jersey Governor Chris Christie is a leader at the state level. Just this last Thursday, May 26, Governor Christie said:

We're going to work to make New Jersey number one in offshore wind production. Last year I signed the Offshore Wind Economic Development Act to provide financial assistance and tax credits to businesses that construct, manufacture, and assemble water access facilities that support offshore wind products. The DEP has completed the first of its kind, two-year baseline study that identifies optimal sites for offshore wind turbines. This study combined with the strong policies I've spoken about is going to be instrumental and has been instrumental at the Department of the Interior recognizing New Jersey in its Smart from the Start program as a wind energy area. That provides us the opportunity for expedited federal permitting in this area, and we're going to try to take advantage of it. We've joined with the federal government and other East Coast states to establish the Atlantic Offshore Wind Energy Consortium to promote commercial wind development on the outer continental shelf. And we've accelerated the development of offshore wind projects by working closely with Interior and the Bureau of Energy Management Regulation and Enforcement to speed the implementation of 1100 MW of wind

turbines. Since the call for interest last month we will be receiving applications for more than 3,000 MW of projects within the next two weeks.

So the interest in New Jersey in wind power is significant, because of the laws that this administration has helped to put into place and we are going to continue to pursue that.

With these introductory and background comments, I will now address the Federal and State roles that are necessary to make the offshore wind industry and its manufacturing and job creation potential a reality.

The Federal Role in Offshore Wind

Legislative Priorities

The Offshore Wind Development Coalition has two major federal legislative priorities. The first is a long-term extension of the Investment Tax Credit. The second is restoration of the US DOE Loan Guarantee program.

1. Long-term extension of the Investment Tax Credit (ITC)

Extension of the “placed-in-service” date applicable to the investment tax credit for offshore wind energy facilities is a very high priority for offshore wind developers. The ITC is the most fundamental federal tax incentive for renewable energy. The ITC imposes a strict deadline of December 31, 2012 for wind farms to qualify, whether onshore or offshore. This is in sharp contrast to the placed-in-service dates for all other renewable energy projects, which range from 2013 for marine and hydrokinetic facilities, biomass, geothermal, municipal solid waste and qualified hydropower to 2016 for solar energy projects. Although the 2012 deadline may create some difficulties for onshore wind, it imposes a near impossible barrier for offshore wind due to the long lead time required for development. In its current form, the ITC may not be available to any of the projects being developed and permitted off the Atlantic Coast or in the Great Lakes.

The unavailability of the ITC will make it hard to finance offshore wind projects and will thwart development of an enormous indigenous offshore wind resource, one that the DOE estimates could reach 54 GW by 2030. Equally troublesome, if the ITC is renewed only for short periods just before it expires, as is often the case with other “extenders”, it may never be usable for offshore wind.

A long-term extension of the ITC is consistent with US policies that applied for coal, oil and gas powered generation when those facilities were first coming on line. Offshore wind developers hope to be given the same consideration. With a level playing field, and achieving the economies of scale discussed above, offshore wind will be a competitive power generation source. According to AWEA (www.PowerofWind.com):

- The Congressional Research Service notes that for more than 90 years fossil fuel industries have taken subsidies via tax breaks.
- The Government Accountability Office, during President Bush’s administration, concluded that fossil fuels continue to receive nearly five times the tax incentives as renewable energy. (Federal Electricity Subsidies, Government Accountability Office, October 2007)

The Offshore Wind Development Coalition strongly supports an ITC extension to at least 2016, the date that currently applies to solar facilities. Such an extension will signal the markets that projects can be developed and financed.

2. Restoration of the DOE Loan Guarantee Program

The US DOE Loan Guarantee program for renewable energy projects was established when the Energy Policy Act of 2005 was enacted into law. The loan program exists to support debt financing for innovative energy projects, including first-mover offshore wind farms. Recent Congressional action on a Continuing Resolution (CR) for Fiscal Year 2011 has essentially eliminated funding for these loan guarantees for our members' projects. Several offshore wind farm developers were recently informed by the US DOE that their applications for loan guarantees were put on hold until additional resources are made available to the program. These loans, which would have reduced the cost of electricity to consumers, are essential to support job creation and economic development opportunities in many states. The loans would also begin to balance the substantial subsidies other sources of electricity generation receive from various federal tax incentive provisions. The elimination of federal loan guarantees presents a significant problem for offshore wind developers, since these guarantees significantly lower the cost of borrowing funds for an offshore wind farm. The cost to the US government is not high: The availability of eight billion dollars of federal loan guarantees, which could support several first-mover projects, would require an appropriation of just \$80 million.

An additional aspect of the loan guarantee program, provided for in the 2009 Recovery Act, had been its funding of a credit subsidy fee, which would otherwise have to be paid by an offshore wind developer at the loan closing. This credit subsidy payment provided for by the Recovery Act would have required offshore wind developers to reach loan closing by September 2011, an unrealistic date, considering the current federal permitting process timeline.

The Offshore Wind Development Coalition respectfully asks Congress to restore and fully fund the US DOE Loan Guarantee program as quickly as possible.

Regulatory Priorities

1. The US DOI's Smart from Start Initiative

The Offshore Wind Development Coalition and our member companies worked hard to make the case that the seven-to-nine year permitting timeline for offshore wind, as originally contemplated by the DOI's Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE, previously the Minerals Management Service – MMS), was too long to support the establishment of this new industry. Secretary Salazar's Smart from the Start initiative has begun to address this long lead time for permitting and has already reduced the timeline by up to two years. This is a significant accomplishment and sends the right signals to offshore wind developers and their investors.

2. Continued Refinement of the BOEMRE Permitting Process for Offshore Wind Farms

In his May 13, 2011 remarks to this Committee on Part I of this hearing, BOEMRE Director Bromwich said that his agency continues to work with other federal and state agencies to improve the permitting process for offshore wind. We think this coordination and collaboration is essential. The Offshore Wind Development Coalition and our member companies have had opportunities to discuss the offshore

wind permitting process with federal officials and we appreciate the efforts they have made to reduce the permitting timeline. While the timeline still needs to be reduced some more, we believe BOEMRE is heading in the right direction. We will continue to work with BOEMRE and federal officials in other agencies to find additional reductions in the time it takes to permit an offshore wind farm.

Overcoming Market Barriers

State-driven policies, discussed in the last section of this testimony, will play a significant role to identify opportunities for offshore wind developers to sell their power into the grid. There is a federal role, too, and that includes federal procurement of power produced by offshore wind farms. To that end, the Offshore Wind Development Coalition has begun conversations with the US Department of Defense and the US Department of Energy to assess whether – and how – the federal government can help meet renewable energy goals set for the government’s electricity use by purchasing energy produced from offshore wind farms.

Research and Development

The US DOE has taken a leading role to identify research and development programs that can support fast-track improvements for offshore wind technology, ranging from more efficient turbines to removal of market barriers to new offshore wind turbine designs. The Offshore Wind Development Coalition and our member companies have an excellent working relationship with DOE officials and its Office of Energy Efficiency and Renewable Energy (EERE). We will continue to work with DOE and EERE on these and other research and development initiatives.

State Role in Offshore Wind

State Support for Federal Government Programs

The US DOI has made cooperation and collaboration with state officials a cornerstone of its approach to offshore wind. We support these initiatives. Two programs stand out: the Federal—State Task Forces that have been formed in most states along the Atlantic and the establishment of the Atlantic Offshore Wind Energy Consortium. As New Jersey’s Governor Christie said, his state will continue to work closely with the US DOI and BOEMRE to “speed the implementation” of offshore wind development in his state. To support the Governors’ efforts to develop offshore wind off of their coasts, the Offshore Wind Development Coalition works closely with state officials affiliated with the Atlantic Offshore Wind Energy Consortium and we have plans to reach out to Governor’s offices in the Great Lakes states and Gulf of Mexico (primarily Texas) so that we can serve as a resource for all coastal states interested in offshore wind.

Market Creation

An important challenge that the offshore wind industry is continuing to address is the need for there to be markets for the power generated by our wind farms. State policies will play a significant role in the creation of these markets. A cost-benefit analysis associated with proposals to locate offshore wind farms in New Jersey is now required by law; this analysis will be carefully reviewed by that state’s utility commission (the NJ Board of Public Utilities) and if the benefits of a specific project justify the costs, that project will be approved. Maryland Governor Martin O’Malley has proposed legislation expected to be considered in the next session of his state’s General Assembly that would require a similar cost-benefit analysis. These analyses will look to the job creation and economic development commitments offshore wind developers can make to the states in which they hope to sell their power.

Economic Incentives for Manufacturers of Offshore Wind Equipment

States along the Atlantic Coast, the Great Lakes and Texas would all welcome the establishment of manufacturing facilities and the jobs associated with the soon-to-be-created offshore wind industry. Manufacturers of offshore wind equipment are being actively courted by the economic development agencies in many of these states. While there clearly will not be a “winner takes all” outcome in regard to which states are able to attract new manufacturers of offshore wind equipment, first mover states will reap the early – and likely more valuable – benefits.

Conclusion

The Offshore Wind Development Coalition appreciates the opportunity to present this written testimony for the Committee’s consideration and for the opportunity to make an oral presentation of a summary of our written comments. We look forward to working with all Members and Staff of the Committee. And we hope that you will consider us as a resource as you deliberate on the value of offshore wind and the job creation and manufacturing opportunities that it offers our nation.