Annual Report

November 10, 2016

Virginia Offshore Wind Development Authority
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EXECUTIVE SUMMARY

INTRODUCTION

2016 was a pivotal year for offshore wind development in the U.S. and in Virginia.

Rhode Island became the home to the first offshore wind power installation in the country with the construction of Deepwater Wind's Block Island Wind Farm – a 30-megawatt installation consisting of five, six-megawatt Alstom wind turbines. The cost of this five-turbine project is reported to be $290 million.

In Virginia, the two-turbine Virginia Offshore Wind Technology Advancement Project (VOWTAP) may have experienced its own watershed moment with the loss of $40 million in funding the project had been awarded from the U.S. Department of Energy. DOE made its decision to withdraw remaining grant funds after Dominion could not guarantee an in-service date for the project earlier than 2020, citing several issues, including the high cost of the project, the inability to get firm construction contracts, and the increasing complexities of gaining regulatory approval for energy infrastructure projects. Current bids for constructing the project range from about $300 million to $380 million, compared to an initial projection based on early engineering and design of about $230 million.

In addition to the Block Island project, three offshore wind developers signed an agreement on September 6, 2016, to use the New Bedford Marine Commerce Terminal during commercial build-out of the Rhode Island and Massachusetts Wind Energy Areas. Additionally, Massachusetts Governor Charlie Baker signed a new law that will push big electric utilities to buy as much as 1,600 megawatts of offshore wind power over the course of a decade. Combined, these first-mover successes send a strong signal to developers that New England is open for offshore wind business.

The uncertainty of the VOWTAP, and likely uncertainty for commercial development, raises serious concerns for VOWDA. If Virginia is to take advantage of its world class manufacturing, work force and port infrastructure, it is incumbent that steps be taken to remove barriers that are giving states to the North a significant advantage for capturing large portions of the nascent offshore wind industry, leaving Virginia as a follower rather that the leader it should be.

BACKGROUND

The Virginia Offshore Wind Development Authority ("VOWDA" or "the Authority) was created in 2010 and vested with the powers set forth in § 67-1201 of the Code of Virginia for the

purposes of facilitating, coordinating, and supporting the development of the offshore wind energy industry, offshore wind energy projects, and associated supply chain businesses, including:

- Collecting relevant metocean and environmental data.
- Identifying existing regulatory or administrative barriers to the development of the offshore wind energy industry.
- Working in cooperation with local, state and government agencies to upgrade port and other logistical facilities and sites to accommodate the manufacturing and assembly of offshore wind energy project components and vessels.
- Ensuring development of such projects is compatible with other ocean uses, including naval facilities and operations, NASA-Wallops Flight Facility operations, shipping lanes, recreational and commercial fisheries, and avian and marine species and habitats.
- Recommending ways to encourage and expedite offshore wind industry development.

The four main goals established by the legislation are summarized as follows:

1. Virginia Offshore Industry Data: Facilitate the definition, collection, and dissemination of relevant metocean data, environmental data, and other information needed by Virginia offshore wind stakeholders, using existing, planned, or projected sources of data collection or activities.

2. Offshore Leasing, Permitting, Financing, and Regulation: Identify existing federal and state barriers to the development of the offshore wind industry in Virginia.

3. Virginia Offshore Job Creation and Supply Chain Development: Work in cooperation with relevant local, state, and federal agencies to accommodate the manufacturing, assembly, and maintenance of offshore wind energy project components and vessels.

4. Offshore Wind Project Siting and Development: Communicate and coordinate with stakeholders to ensure the development of offshore wind projects is compatible with other ocean uses and avian and marine resources, including both the possible interference with and positive effects on naval facilities and operations, NASA-Wallops Flight Facility operations, shipping lanes, recreational and commercial fisheries, and avian and marine species and habitats.

To accomplish its goals, the Authority worked with and supported efforts by the Virginia Department of Mines, Minerals and Energy (DMME), the federal Bureau of Ocean Energy

Management (BOEM), and other stakeholders to help accelerate offshore wind development projects in Virginia and address financial and environmental issues. The Authority heard presentations from various stakeholders and experts and analyzed this and other information to determine the appropriate next steps to facilitate development of the offshore wind energy resource, to provide reasonably priced renewable energy, and to develop an offshore wind industry and supply chain that will create economic opportunity for businesses and good jobs for Virginians.

Development of Virginia's offshore wind resource, as well as development off other mid-Atlantic state coasts can provide for new Virginia business growth and long-term employment opportunities in manufacturing, installation, and maintenance. It can also enhance the environment and serve as a key component of Virginia's compliance with the new EPA Clean Power Plan.

Several activities were completed during the 2015-2016 report year which support offshore wind power development, but cost and regulatory barriers have also been encountered which must be overcome going forward:

- In March 2016 BOEM announced its approval of the Research Activities Plan for the two turbine VOWTAP – the first wind energy Research Activities Plan (RAP) for a facility to be located in U.S. federal waters.

- In 2015 Dominion held a comprehensive stakeholder review process to determine how costs for the VOWTAP could be reduced to keep the project on track. Based on the recommendations derived from this stakeholder process, Dominion issued a new RFP in late 2015, breaking the project up into multiple bid packages instead of a single EPC Project Scope as in the first RFP. The new bid process resulted in a reduction over the first estimate of approximately $400 million; however, the bids were still higher than original estimates, ranging from about $300 million to $380 million, compared with an initial estimate of about $230 million.

- The U.S. DOE withdrew its Offshore Wind Advanced Technology grant funding after Dominion could not guarantee the project could be completed by 2020 because of cost and regulatory hurdles.

  DOE originally required Dominion's two turbines be installed and operational by the end of 2017, but, due to the unexpectedly high bids received for the project in 2015, they requested and received a one year extension, contingent upon Dominion meeting certain milestones, including convening the stakeholder process and rebidding the project. After the new bids were received, because of remaining cost and regulatory

hurdles, Dominion still could not guarantee a startup earlier than 2020. As such, DOE withdrew remaining grant funding. While considerable research has been completed and much knowledge gained on off-shore wind placement in hurricane prone regions as part of the VOWTAP, the cost setbacks are causing Dominion and the other partners in the project to look at other possible paths forward.

- DMME and BOEM entered into two cost share agreements for research:
  - Fugro Consultants Inc. completed the reprocessing of existing seismic reflection data collected by Fugro under contract to DMME and BOEM in 2013 to supplement and expand the value of their prior interpretation. The additional data processing and interpretation of the 2013 seismic reflection data provides valuable additional detailed definition of the subsurface conditions beneath the WEA.
  - The Virginia Coastal Zone Management Program at the Department of Environmental Quality developed fine-scale maps of important commercial and recreational fishing areas in and around the Virginia WEA. These maps were used in collaboration with the fishing industry to create best management practices regarding communication, design, operation, and environmental monitoring of commercial wind facilities offshore Virginia.
- DMME funded a final year of wave buoy data and archiving through its contract with Coastal Obs Tech Services. The buoy will likely be decommissioned and retrieved at the end of April 2017.
- DMME funded the development and implementation of a Mid-Atlantic Metocean Data Portal, enabling real-time validation of offshore wind and wave forecasts off Virginia. This includes an interactive Web interface for users to quickly evaluate the forecast skill of different models, thereby reducing the risk of encountering unexpected rough waves or high winds during Mid-Atlantic offshore site assessment, construction, and operation activities.
- DMME funded detailed analysis of data from the U.S. Department of Energy's Wind Sentinel buoy off Virginia. This is the first publicly funded offshore wind resource assessment based on a full year of hub-height, rotor-spanning LiDAR measurements at a project site, and the correlation of those measurements with nearby long-lived reference stations to estimate turbine output over the project life.

As a result of its activities and accomplishments in 2016, the Authority makes the following recommendations to advance offshore wind development and related supply chain activities in Virginia. The recommendations are ranked in order of priority.

RECOMMENDATION 1: Encourage and support any legislative proposal that is introduced to establish a mandatory renewable energy standard with a specific goal for offshore wind for the Commonwealth of Virginia.

RECOMMENDATION 2: Work with DMME to identify possible participants in other projects in the research area that do not interfere with VOWTAP.

RECOMMENDATION 3: Work with the Governor's Office, DMME, and interested stakeholders including possible offtakers, to build support for SCC approval of the VOWTAP project.

As required by § 67-1209 of the Code of Virginia, the Authority submits this sixth annual report to the Governor and the Chairmen of the House Appropriations Committee, the Senate Finance Committee and the House and Senate Commerce and Labor Committees.

MISSION AND OBJECTIVES

Virginia has unique characteristics and an excellent wind resource that make it an ideal location for offshore wind power development. Virginia is well positioned to become a leading base of operations for the offshore wind industry for the mid-Atlantic region, bringing quality jobs and other benefits to Virginia's citizens and businesses.

In 2010, the Virginia Offshore Wind Development Authority (VOWDA or the Authority) was created and vested with the powers set forth in § 67-1201 of the Code of Virginia. The Authority was established for the purposes of facilitating, coordinating, and supporting the development of the offshore wind energy industry, offshore wind energy projects, and associated supply chain businesses. A copy of the Authority's Mission Statement and Objectives can be found in *Appendix A*.

The four main goals established by the legislation are summarized as follows:

- Virginia Offshore Industry Data: Facilitate the definition, collection, and dissemination of relevant metocean data, environmental data, and other information needed by Virginia offshore wind stakeholders, using existing, planned, or projected sources of data collection or activities.

- Offshore Leasing, Permitting, Financing, and Regulation: Identify existing federal and state barriers to the development of the offshore wind industry in Virginia.

- Virginia Offshore Job Creation and Supply Chain Development: Work in cooperation with relevant local, state, and federal agencies to accommodate the manufacturing, assembly, and maintenance of offshore wind energy project components and vessels.

- Offshore Wind Project Siting and Development: Communicate and coordinate with stakeholders to ensure the development of offshore wind projects is compatible with other ocean uses and avian and marine resources, including both the possible interference with and positive effects on naval facilities and operations, NASA-Wallops Flight Facility operations, shipping lanes, recreational and commercial fisheries, and avian and marine species and habitats.

The Governor appoints the nine non-legislative citizen members. Six of the inaugural members served terms of less than four years to maintain continuity of operations by ensuring that all appointments do not expire in the same year. Thereafter, all appointments or re-appointments are for four year terms. In 2015, the Authority elected Robert Matthias to serve as Chair and Joan Bondareff as Vice-Chair. The full list of VOWDA Board Members is included as *Appendix B*.

VOWDA has broad authority to accept, hold, invest and administer monies, grants, securities or other property, to make and execute contracts with public and private entities as necessary, and to hire consultants, attorneys, financial experts and others as necessary to fulfill its mission. The Director of DMME serves as the Director of the Authority, and DMME serves as staff to the Authority.

The legislation requires the Authority to provide by October 15 each year an annual summary of the activities of the Authority and policy recommendations to the Governor, the Chairs of the House and Senate Commerce and Labor Committees and the Chairs of the House Appropriations and Senate Finance Committees. Copies of all VOWDA reports are available on its website, http://wind.jmu.edu/offshore/vowda/index.html.

VIRGINIA OFFSHORE WIND DEVELOPMENTS AND ACTIVITIES

VOWDA

To accomplish its goals and objectives, the Authority regularly updates and works to implement a comprehensive work plan. Objectives include the following:

- Engage with agencies and stakeholders to support and accelerate offshore wind development and associated supply chain in Virginia, including support for the successful completion of the VOWTAP.
- Secure financial and other resources; leverage state funding with additional private and federal funding to give Virginia a competitive advantage over other Mid-Atlantic States in attracting the offshore wind industry.
- Identify and address policy and regulatory issues and barriers.
- Acquire and share data.
- Promote Virginia's unique attributes and readiness for offshore wind and encourage port and supply chain development.

VOWDA supported efforts by DMME, BOEM, and other stakeholders to help accelerate the funding and development of offshore wind development projects in Virginia. The Authority heard presentations throughout the year from various stakeholders and experts and analyzed this and other information to determine the appropriate next steps to facilitate development of the offshore wind energy resource, to provide reasonably priced renewable energy, and to develop an offshore wind industry and supply chain that will create economic opportunity for

businesses and good jobs for Virginians. Presentations can be viewed on the VOWDA website at http://wind.jmu.edu/offshore/vowda. Presentations included:

- Dominion Virginia Power – Progress reports on the Virginia Offshore Wind Technology Advancement Project and the stakeholder group process to discuss how to lower costs and risk associated with the demonstration project.
- BVG Associates – Overview of the Virginia Offshore Wind Port Readiness Study completed in June 2015 to evaluate the general readiness of Virginia's port terminals and to develop on-shore site build-out scenarios for producing and staging various specific offshore wind components. This study supports the 2014 Virginia Energy Plan's recommendation to establish Virginia as the hub for the manufacturing, operational and supply chain hum for offshore wind development in the Mid-Atlantic region.
- American Jobs Project – Overview of the findings of the American Jobs Project Report, written in partnership with Virginia Tech, on the potential for creating Virginia jobs in the offshore wind and carbon fiber industries. The report, which finds that the benefits from the significant numbers in job creation over the next five years outweigh the costs, would be helpful in documenting Virginia's case.
- Virginia's Offshore Wind Value Proposition – Overview of proposition for Virginia to participate in the emerging U.S. offshore wind supply chain.

STATE AND FEDERAL

Virginia Offshore Wind Advanced Technology Project

- In March 2016 the BOEM announced its approval of the Research Activities Plan for the two turbine VOWTAP – the first wind energy Research Activities Plan (RAP) for a facility to be located in U.S. federal waters.

  BOEM's approval package also approves DNV GL as the Certified Verification Agent and grants the project easement requested in the RAP. The RAP approval allows for the installation and operation of two 6-MW turbines and associated cabling to shore pending final engineering review.

  The RAP was developed by DMME's designated lease operator, Virginia Electric and Power Company, doing business as Dominion Resources, Inc. (Dominion), and describes the proposed construction, operation, maintenance, and eventual decommissioning of the VOWTAP.

Data collected under this research lease will help the utility to better understand the wind potential, weather and other conditions relevant to generating power from wind offshore Virginia, and will allow them to gain experience with new offshore renewable energy technology, which is not only valuable to Virginia and BOEM, but also to other government agencies, the offshore renewable energy industry, and other stakeholders.

- The Dominion VOWTAP project met with a setback when the Department of Energy withdrew $40 million in funding the project had been awarded. In 2012, VOWTAP was one of seven projects to receive a $4 million DOE award. In 2014, DOE awarded the project up to an additional $47 million to help fund the construction. Through 2016 about $10 million had been received by the project.

  Dominion had previously estimated the turbines could be built at a cost of $230 million, including DOE funds; however, an initial round of bids from developers came in well over that, ranging from $375-$400 million. A second round of bids breaking the project up into multiple components - a recommendation made as a result of the 2015 Dominion VOWTAP stakeholder process - brought the cost estimates down to $300-380 million – still well above original estimates.

  Dominion proposed filing for a Certificate of Public Convenience (CPCN) with the Virginia State Corporation Commission (SCC), but to not file a request for approval of rate recovery, as Dominion explored avenues for cost reductions. The CPCN looks at the merits of the offshore wind project for Virginia. Once SCC ruled to grant the CPCN, Dominion could move forward with rate recovery filing.

  Since this process would push the project completion date to 2019 – 2020, DOE made the decision not to continue funding for the project, even though it would have allowed the project to move forward.

  Authority member Mary Doswell provided a status update at the November 10, 2016 meeting. She noted that Dominion lost the DOE funding due to delay of project and not because Dominion withdrew the project. While the VOWTAP is important and still a commitment to Dominion, Doswell said, the withdrawal of the DOE grant funds has created another financial hole that must be filled. She reported that Dominion is working to determine the next steps to move the project forward, i.e. move forward with SCC filings, look at options to bring in partners, reconvene the stakeholders to discuss other next steps and opportunities to continue VOWTAP.

Commercial Offshore Wind Lease

A complete Site Assessment Plan was submitted by Dominion to BOEM for meteorological evaluations and site assessment on March 2, 2016.

The plan details the methods and procedures Dominion will use to collect and analyze meteorological data and information on the conditions of the marine environment within the Commercial Lease. Collection of this data will be performed using a WindSentinel™, a floating light detection and ranging (LiDAR) buoy. The plan also details the installation and operation of the WindSentinel™

Funding to Accelerate and Assist Private Development of the Virginia WEA

- **Continued Funding for WaveRider Wave Buoy:** DMME received a General Fund appropriation of $30,000 for continued operation and data gathering of a Datawell WaveRider buoy. DMME contracted with Coastal Obs Tech Services LLC (COTS) of Virginia Beach to deploy and maintain the buoy and to collaborate with the Coastal Data Information Program (CDIP) at the Scripps Institution of Oceanography located at the University of California San Diego. The CDIP is an extensive network for monitoring waves and beaches along the coastlines of the United States. The data from this particular buoy is used as part of the **Metocean Data portal and Wave Forecast Model** discussed below. The bulk of the ($25,000) General Fund appropriation covers subscription services with CDIP program to provide real time data acquisition, analysis, dissemination and archiving of wave data measured by the COTS WaveRider buoy. Following analysis and data verification, data will be disseminated to the National Weather Service for distribution over the Marine Broadcast Network. Analyzed data is published on the internet and available at http://cdip.scsd.edu and archived at CDIP and the National Centers for Environmental Information**.**

- **Metocean Data portal and Wave Forecast Model:** DMME funded the development and implementation of a Mid-Atlantic Metocean Data Portal, enabling real-time validation of offshore wind and wave forecasts off Virginia. This includes an interactive Web interface for users to quickly evaluate the forecast skill of different models, thereby reducing the risk of encountering unexpected rough waves or high winds during Mid-Atlantic offshore site assessment, construction, and operation activities. DMME also has funded detailed analysis of data from the U.S. Department of Energy's WindSentinel buoy off Virginia. This is the first publicly funded offshore wind resource assessment based on a full year of hub-height, rotor-spanning LiDAR measurements at a

project site, and the correlation of those measurements with nearby long-lived reference stations to estimate turbine output over the project life.

- **Virginia Wind Energy Area Ocean Geological Survey, Phase II Analysis:** Fugro Consultants, Inc. supplemented and expanded the seismic reflection data collected across the offshore Virginia WEA in 2013, under contract with DMME and BOEM, in Phase I of the Ocean Geological Survey. The additional processing and data analyses was used to evaluate different hydrophone streamer configurations and seismic data processing techniques that affect the interpretation of paleo-landforms in support of marine archeological resource assessments and geologic interpretation for support of site characterization and engineering studies. The 2013 data were processed as 16 channels, which enhances the resolution and detail of the near surface geological conditions and stratigraphy down to about 30 meters below the seafloor. This provides valuable additional detailed definition of the subsurface conditions beneath the WEA, increasing the understanding of the geological conditions and expected geotechnical sequence in a critical depth interval for the design of offshore structures and infrastructure.

- **The Virginia Coastal Zone Management Program:** The Department of Environmental Quality completed their DMME and BOEM funded project -- C*ollaborative Fisheries Planning for Virginia's Offshore Wind Energy Area* — to provide a process for working with the recreational and commercial fishing sectors. To prepare for eventual development of wind energy facilities off the coast of Virginia, the project was designed to:

  - Identify fishing communities potentially affected by the VWEA**.**
  - Establish a collaborative process for a two-way exchange of information with identified communities.
  - Develop accurate, fine-scale maps of important recreational, commercial, and charter fishing areas in and around the VWEA through a collaborative effort with fishermen.
  - Build upon BOEM's *Report on Best Management Practices (BMPs) and Mitigation Measures for Fishing and Offshore Wind Energy Development* by working with fishermen to develop a fisheries communication plan and other BMPs.
  - Create BMPs regarding communication, design, operation, and environmental monitoring of a commercial wind facility.

Chesapeake Light Tower

The DOE acquired custody of the Chesapeake Light Tower (CLT) from the U.S. Coast Guard in December 2012 to examine the feasibility of repurposing the platform into a research center for offshore renewable energy called the Reference Facility for Offshore Renewable Energy (RFORE). Based upon the results of the various assessments, DOE decided not to pursue renovation of the CLT into the RFORE concept and therefore no longer has a mission need for the platform. In January 2015 DOE declared the CLT as surplus property and reported it as such to the General Services Administration, who held a public auction for the property. The auction opened on June 3, 2016 and closed on August 3, 2016. There were a total of 15 bidders and the winning bid was $215,000. The identity of the winning bidder is unknown at this time.

U.S. House and Senate Federal Tax Credits

In December 2015, the **Consolidated Appropriations Act, 2016** extended the expiration date for the Renewable Energy Production Tax Credit to December 31, 2019, for wind facilities commencing construction, with a phase-down beginning for wind projects commencing construction after December 31, 2016. The Act extended the tax credit for other eligible renewable energy technologies commencing construction through December 31, 2016. The Act applies retroactively to January 1, 2015.

The federal renewable electricity production tax credit (PTC) is an inflation-adjusted per-kilowatt-hour (kWh) tax credit for electricity generated by qualified energy resources and sold by the taxpayer to an unrelated person during the taxable year. The duration of the credit is 10 years after the date the facility is placed in service for all facilities placed in service after August 8, 2005.

Likewise, the Consolidated Appropriations Act included several amendments to the Business Energy Investment Tax Credit (ITC) which apply to solar technologies and PTC-eligible technologies, including wind power. Notably, the expiration date for these technologies was extended, with a gradual step down of the credits between 2019 and 2022.

The ITC has been amended a number of times, most recently in December 2015. The expiration date for solar technologies and wind is based on when construction begins. For all other technologies, the expiration date is based on when the system is placed in service (fully installed and being used for its intended purpose).

U.S. Representative James Langevin introduced legislation aimed at ensuring that federal tax credits for offshore wind energy projects will be extended to 2025. Langevin, who serves as Energy Task Force Chair of the Sustainable Energy and Environment Coalition in Congress,

submitted the bill called the Offshore Wind Incentives for New Development Act on Thursday, September 15. The House bill is identical to the Senate version introduced by Rhode Island Senator Sheldon Whitehouse and Massachusetts Senator Ed Markey.

Governors' Wind and Solar Energy Coalition

In September 2016, the Governors' Wind and Solar Energy Coalition, a bipartisan group of twenty U.S. Governors of which Virginia Governor Terry McAuliffe is a member, wrote a letter to President Barrack Obama suggesting actions that his Administration can take to expand the states' wind and solar energy production. These actions include expediting the employment of offshore wind and improving the permitting collaboration efforts. A copy of this letter is included as *Appendix C*.

SIGNIFICANT OFFSHORE WIND DEVELOPMENTS IN OTHER STATES

California

In March 2016 BOEM announced the potential leasing for commercial wind energy development in federal waters offshore California. BOEM has completed an initial review of an unsolicited lease request from Trident Winds, LLC (Trident Winds) for a floating wind energy project offshore Morro Bay, California, deemed the request complete, and will issue a Federal Register Notice to determine if there is competitive interest in the area.

The Trident Winds request, submitted on January 14, 2016, is the first formal interest in obtaining a lease for wind development in federal waters off California. The proposed project would generate up to 800 megawatts (MW) of power using about 100 floating foundations, each supporting a turbine that could produce up to 8 MW. A single seafloor transmission cable would bring the electricity to shore. The proposal may be expanded to generate 1,000 MW at a later date, if additional transmission capacity and market off-take can be obtained. The project would be located about 33 nautical miles northwest of Morro Bay in water depths of 2,600-3,300 feet. The proposed lease area is 67,963 acres.

Hawaii

BOEM received three unsolicited wind energy lease requests from two potential developers: two lease requests from AW Hawaii Wind, LLC (AWH), the **AWH Oahu Northwest Project** and the **AWH Oahu South Project**; and one from Progression Hawaii Offshore Wind, Inc. (Progression), the **Progression South Coast of Oahu Project**. Each project proposes an offshore floating wind energy facility with a capacity of approximately 400 megawatts (MW) of

renewable energy. The energy generated by the projects would be transmitted to Oahu by undersea cables. The Projects would be designed to serve primarily the Hawaiian island of Oahu. With a population of just under 1 million, or approximately 70% of the population of the State, Oahu is by far the most populated Hawaiian Island and consequently has the highest electricity load.

Maine

Upon withdrawing grant funding from both the Dominion VOWTAP project and Principle Power's WindFloat project in Oregon, the U.S. DOE indicated that the University of Maine's Aqua Ventus I project is eligible for up to $40 million in additional funding in future project performance periods after reaching specific milestones, subject to congressional appropriations and progress reviews.

The University of Maine plans to install a pilot floating offshore wind farm with two 6-megawatt direct-drive turbines on concrete semi-submersible foundations at a test site off of Monhegan Island, Maine.

Because of its location in deep waters off the coast of Maine, where traditional foundations are not feasible, the University of Maine is developing an innovative floating platform.

The University of Maine has demonstrated a 1:8-scale prototype of their floating VolturnUS foundation, and they have applied the knowledge gained in designing, constructing and deploying the prototype to the engineering efforts of the full-scale design. The University and its partners have made significant progress on the engineering design of the full-scale foundation by focusing on commercial-scale manufacturing of the foundation and reducing costs. These considerations have led to significant reductions in the internal steel requirements and vastly improved manufacturability of the foundation.

Maryland

Maryland has passed legislation to support offshore wind development through a system of ORECs. This is what has drawn European developers to Maryland's shores.

U.S. Wind Inc., a subsidiary of Renexia, an Italian energy and construction company, was awarded two commercial wind energy development leases offshore Maryland for $8.7 million in August 2014. The WEA covers approximately 80,000 acres located about 10 nautical miles from the Ocean City coastline: North Lease Area, 32,737 acres; South Lease Acres, 46,970 acres. The executed leases went into effect on December 1, 2014. The planned 750 MW development consists of 187 turbines. In August 2016, Alpine Ocean Seismic Survey, Inc. began conducting

data collection along the 35-mile route from the project site through Indian River Bay to a power plant near Millsboro, Del. The survey includes sediment core samples at 36 locations along the route to test the composition of the sediment to ensure it is safe for the power cable.

Massachusetts

New Energy Legislation

On August 8, 2016, the Governor signed "An Act to Promote Energy Diversity," which requires utilities to procure a combined 1,600 megawatts of electricity from offshore wind by June 30, 2027. This legislation is part of the state's broader goal to reduce greenhouse gas emissions by 80 percent by 2050. According to the bill, companies will have to solicit bids for getting power from offshore wind projects by June 30, 2027 and those proposals can only be for projects with a capacity of at least 400 megawatts. This new renewable energy legislation is intended to help support offshore wind developers off the coast of Massachusetts, and is one reason European developers have looked to Massachusetts as a state they want to do business with. DONG Energy, Offshore Wind MW and others are going to participate in upcoming Massachusetts lease sales and will be the companies qualified to respond to the upcoming Massachusetts RFPs for offshore wind. These companies have also recently agreed to use the New Bedford Marine Terminal as their staging location for offshore wind projects.

Commercial Wind lease Site Assessment

- Lease OCS-A 0500. On January 29, 2016, Bay State Wind submitted a SAP Survey Plan to BOEM for review. Bay State Wind requested a one-year extension for submitting its SAP, which BOEM approved. The SAP is now due on April 1, 2017. Once submitted, BOEM will review the SAP and approve, disapprove, or approve with modifications the proposed site assessment activities.

- Lease OCS-A 0501. On May 31, 2016, Offshore MW submitted a SAP Survey Plan to BOEM for review. Offshore MW requested a one-year extension for submitting its SAP, which BOEM approved. The SAP is now due on April 1, 2017. Once submitted, BOEM will review the SAP and approve, disapprove, or approve with modifications the proposed site assessment activities.

New Bedford Marine Commerce Terminal

In September 2016 the Governor signed a letter of intent (LOI) with DONG Energy, Deepwater Wind and OffshoreMW to lease the New Bedford Marine Commerce Terminal as a staging and deployment location for future wind projects. Operated by the Massachusetts Clean Energy Center (MassCEC), the New Bedford Marine Commerce Terminal is a multi-purpose,

26-acre facility designed to support the construction, assembly, and deployment of offshore wind projects, as well as handle bulk, break-bulk, container, and large specialty marine cargo. DONG Energy, Deepwater Wind and OffshoreMW hold leases in federally identified offshore wind energy development areas located 14 miles south of Martha's Vineyard. Through the Executive Office of Energy and Environmental Affairs and MassCEC, the LOI with the developers represents a commitment to a two-year lease at $5.7 million annually.

Cape Wind Status

With the approval of a Construction and Operations Plan (COP) and a completed Facility Design Report (FDR) and Fabrication and Installation Report (FIR), Cape Wind Associates (CWA) has satisfied almost all of BOEM's regulatory requirements for the planning and design of an offshore wind power facility. There are some remaining lease stipulations and conditions of COP approval that CWA must satisfy, and CWA must post decommissioning financial assurance in accordance with 30 C.F.R. §585.517. On February 26, 2015, CWA submitted a request for a two-year suspension of the operations term of its commercial lease. BOEM approved the lease suspension on July 24, 2015, and issued a suspension order pursuant to 30 CFR 585.418. No construction or installation activities related to commercial lease OCS-A 0478 may occur during the lease suspension period. The lease suspension expires on July 24, 2017.

Offshore Wind Development Funding

On August 26, 2016, Governor Baker and Lieutenant Governor Polito announced $700,000 in funding for nine academic and research institutions across Massachusetts to advance studies relating to offshore wind development. The funding, from the Massachusetts Clean Energy Center's (MassCEC) Renewable Energy Trust, will support three offshore wind research projects to identify industry workforce training and safety requirements, establish a multi-university partnership focused on innovation, and driving down costs, and develop a new technique to monitor the structural health of wind blades. The following academic and researching institutions will receive funding:

- Bristol Community College, the University of Massachusetts Dartmouth and the Massachusetts Maritime Academy ($248,000) – Bristol Community College will lead an effort to identify the workforce requirements associated with the development and construction of offshore wind projects: examining the number of jobs by trade, the health and safety training requirements, and the economic benefits to the commonwealth.

- The Massachusetts Research Partnership in Offshore Wind ($300,000) – Northeastern University, Tufts University, the University of Massachusetts Amherst, the University of Massachusetts Dartmouth, the University of Massachusetts Lowell and the Woods Hole Oceanographic Institution will develop a multidisciplinary framework for offshore wind research, focusing on increasing innovation within projects and reducing costs by examining risks, finances and regulations associated with the industry.

- University of Massachusetts Lowell ($150,000) – The University will develop low-cost microphones to detect sound changes caused by damage to a wind turbine blade. The project will be field-tested at MassCEC's Wind Technology Testing Center in Charlestown and is being supported by the University of Massachusetts Lowell's WindSTAR research center and the University of Texas at Dallas.

New Jersey

New Jersey has enacted OREC legislation for offshore wind but to date the New Jersey Board of Public Utilities has not issued regulations to establish a framework for the ORECs. Recently Governor Christie vetoed legislation that once again would direct the Board of Public Utilities to take action on these regulations. In the meantime, Fisherman's Energy is continuing work on its wind farm in state waters.

Commercial Wind

On November 9, 2015, BOEM held a competitive lease sale (auction) -- Atlantic Wind Lease Sale Five (ATLW5) for the Wind Energy Area (WEA) offshore New Jersey. The New Jersey WEA includes about 343,833 acres. It begins about 7 nautical miles offshore and extends roughly 21 nm seaward. BOEM auctioned the area as two leases: Lease OCS-A 0498 (South Lease Area) and Lease OCS-A 0499 (North Lease Area). The South Lease Area consists of 160,480 acres and the North Lease Area consists of 183,353 acres. The lease auction lasted seven rounds. The provisional winners of the lease sale are RES America Developments Inc., which bid $880,715 for lease area OCS-A 0498; and US Wind Inc., which bid $1,006,240 for OCS-A 0499. The commercial leases were signed by BOEM on February 4, 2016 and went into effect March 1, 2016.

Interim Policy Leases

Deepwater Wind LLC OCS-A 0472 lease and Fishermen's Energy of New Jersey LLC leases expired November 1, 2014, and were decommissioned October 17, 2015.

New York

Clean Energy Standard

On August 1, 2016, the New York State Public Service Commission approved New York's Clean Energy Standard, which will require 50 percent of New York's electricity to come from renewable energy sources by 2030, with a phase in schedule over the next several years. In its initial phase, utilities and other energy suppliers will be required to procure and phase in new renewable power resources starting with 26.31 percent of the state's total electricity load in 2017 and grow to 30.54 percent of the statewide total in 2021. Governor Cuomo by executive order established a goal for NYS of 50% renewable energy by 2030. This goal is expected to be met primarily by offshore wind. Leases will be auctioned by the end of the year off the coast of Long Island. NYSERDA and LIPA have an agreement to participate in buying the offshore wind.

New York has released a Blueprint for the New York State Offshore Wind Master Plan, which outlines a comprehensive offshore wind strategy including an emphasis on stakeholder engagement and reducing costs. The Master Plan, which is expected to be released in 2017, will include a state commitment to undertake pre-development activities, a complete economic perspective that considers both value and cost of projects, and an effort to couple the acquisition of a site lease with the agreement for power purchase.

Commercial Lease

- On June 2, 2016, Secretary of the Interior Sally Jewell and BOEM Director Abigail Ross Hopper announced the proposed lease sale and Environmental Assessment for 81,130 acres offshore New York for commercial wind energy leasing.
- BOEM published a "Proposed Sale Notice (PSN) for Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore New York" in the *Federal Register* on June 6, 2016, which includes a 60-day public comment period ending on August 5, 2016.
- In addition to the PSN, BOEM published an Environmental Assessment (EA) for public comment until July 13, 2016. The EA considers potential impacts associated with issuing a lease, associated surveys, and approving the installation of resource assessment facilities (i.e., meteorological tower and/or buoys) in the area. BOEM may move forward with steps to hold a competitive lease sale for commercial wind development offshore New York once public comments are considered, and the EA and associated consultations are concluded.

Wind Energy Area Identification

On March 16, 2016, the Department of Interior announced that BOEM has identified a Wind Energy Area (WEA) offshore New York. The WEA's closest point to shore is 11 nautical miles from Long Beach, NY. From its western edge, the area extends approximately 26 nautical miles southeast at its longest portion. The project area consists of 5 full OCS blocks and 148 sub-blocks. The entire area is approximately 127 square miles, 81,130 acres, or 32,832 hectares.

Renewable Energy Viewshed Analysis and Visualization Simulation for the NY Call Area

In response to stakeholder interest regarding visual impacts from potential future renewable energy development within the New York Call Area, BOEM has undertaken a project to develop visual simulations of a hypothetical wind energy facility on the Outer Continental Shelf offshore Long Island, New York. The purpose of the study is to characterize the potential onshore visibility of offshore wind turbines from locations along the coasts of New York and New Jersey under different seasons, times of day and weather condition.

North Carolina

Commercial Lease

On August 12, 2016, BOEM Director Abigail Ross Hopper announced the release of the Atlantic Wind Lease Sale 7 Proposed Sale Notice (PSN) and Request for Interest (RFI) for 122,405 acres offshore North Carolina. The PSN and RFI requests any prospective bidders already qualified for commercial wind energy development offshore North Carolina affirm their continued interest and requests public comments on BOEM's proposal to auction one lease offshore North Carolina for commercial wind energy development. The comment period closes on October 17, 2016. Comments received or postmarked by October 17, 2016 will be made available to the public and considered before the publication of the Final Sale Notice, which will announce the time and date of the lease sale. Information related to the PSN and RFI is located below.

Ohio

Upon withdrawing grant funding from both the Dominion VOWTAP project and Principle Power's WindFloat project in Oregon, the U.S. DOE indicated that Lake Erie Energy Development Corporation's (LEEDCo's) Project Icebreaker is eligible for up to $40 million in additional funding in future project performance periods after reaching specific milestones, subject to congressional appropriations and progress reviews.

LEEDCo plans to install six 3.45-megawatt direct-drive turbines on Mono Bucket foundations seven miles off the coast of Cleveland in Lake Erie.

The Mono Bucket foundation was selected through significant engineering analysis, and is expected to reduce installation time, costs, and environmental impacts compared to traditional foundations that require pile driving. The Mono Bucket not only is a solution for the Great Lakes, but also has broader national applicability for offshore wind installations off the Atlantic and Gulf Coasts.

LEEDCo has assembled a credible, experienced team to support project development, and will also address technical challenges unique to fresh water offshore wind deployments such as icing.

Oregon

DOE withdrew grant funding for the Principle Power WindFloat project off the coast of Oregon when it became clear that Principle Power would be unable to get an above-market power purchase agreement for WindFloat Pacific from the state's two major investor-owned utilities, Portland General Electric and Pacific Power, and there was no political appetite to force it.

Governor Kate Brown did set up a "WindFloat Pacific Offshore Wind Advisory Committee" in the summer of 2015. They were unable to find a solution. As such, DOE was forced to withdraw Principle Power's Offshore Wind Advanced Technology Demonstration Grant.

On September 7, 2016 Principle Power withdrew its lease request for the site approximately 25 kilometers west of Oregon's Port of Coos Bay.

Rhode Island

Rhode Island became the home to the first offshore wind power installation in the country with the construction of Deepwater Wind's Block Island Wind Farm – a 30 megawatt installation consisting of five, six-megawatt Alstom wind turbines. The project needs to complete equipment commissioning and testing before beginning operation, which is scheduled for the fall of 2016. The cost of this five-turbine project is reported to be $290 million.

South Carolina

Commercial Lease

On November 23, 2015, BOEM published a Call for Information and Nominations (Call) in the Federal Register (under Docket ID: BOEM-2015-0134) for a 60-day public comment

period to gauge the offshore wind industry's interest in acquiring commercial wind leases in four areas offshore South Carolina and to request comments regarding site conditions, resources and other uses within the Call areas. The comment period ended on January 25, 2016.

Environmental Review

BOEM published a Notice of Intent (NOI) to Prepare an Environmental Assessment (EA) in the Federal Register on November 23, 2015 (under Docket ID: BOEM-2015-0125). Through the NOI, BOEM sought public comment for determining issues and alternatives to be analyzed in the EA. The EA will consider potential environmental and socioeconomic impacts associated with issuing commercial wind leases and approving site assessment activities on the lease areas. The NOI included a 60-day public comment period, which closed on January 25, 2016.

RECOMMENDATIONS

RECOMMENDATION 1: Encourage and support any legislative proposal that is introduced to establish a mandatory renewable energy standard with a specific goal for offshore wind for the Commonwealth of Virginia.

RECOMMENDATION 2: Work with DMME to identify possible participants in other projects in the research area that do not interfere with VOWTAP.

RECOMMENDATION 3: Work with the Governor's Office, DMME, and interested stakeholders including possible offtakers, to build support for SCC approval of the VOWTAP project.

FUTURE GOALS AND ACTIVITIES

VOWDA will continue to engage with BOEM, the Virginia Offshore Wind (VOW) Coalition and others to monitor, support, expedite and provide input to identify key next steps in the Virginia Offshore Wind commercial development process. The following are anticipated activities for the coming year:

- Consider ways to promote the value and benefits of offshore wind development and to generate increased public and political support.

- Support VOWTAP's advancement following the loss of DOE grant funds.

VOWDA will also continue to support commercial-scale development of the Virginia WEA and the cultivation of industry to support offshore wind, including:

- Identifying and promoting specific Port and private assets and facilities unique to Virginia to support private developers and supply chain members involved in pre-construction, construction, operation and maintenance.

- Exploring and identifying opportunities to collaborate regionally in anticipation of wind power development in neighboring states.

- Monitoring and engaging with PJM's ongoing Regional Transmission Expansion Plan (RTEP) process as the costs of offshore wind transmission are explored – especially as issues of cost allocation for offshore transmission are considered.

- Maintaining and updating information on wind resource data, economics and environmental impacts, and information characterizing the state and federal regulatory framework for establishing a project off the coast of Virginia.

- Supporting the VOW Coalition and other stakeholders to assess the sourcing and supply strategy for components, services, and vessels employed or being contemplated for other offshore wind farms in the U.S. and overseas, and identifying how Virginia companies and resources can best be deployed to promote and benefit from offshore wind development in Virginia and neighboring states.

- Reengaging with the Virginia Economic Development Partnership (VEDP) following their internal reorganization and providing technical support in identifying state and other financial incentives that might be available to help commercialize emerging technologies that can create Virginia jobs. This includes identifying leading candidate businesses and helping to connect with state and federal support programs, particularly focused on Tier 3 and Tier 4 suppliers who can export to Tier 1 and Tier 2 integrators now expanding in European offshore wind supply chains.

- Supporting continued development of a strategic or ocean management plan for Virginia waters, which includes uses such as offshore wind, and participating in the Coastal and Marine Spatial Planning process for federal waters off the coast of Virginia.

- Identifying grants and other financing mechanisms to support offshore wind development, including the supply chain based in Virginia, endorsing and possibly

participating in federal grant applications and state efforts to support projects that improve the offshore wind value chain, reduce the delivered cost of power, and create jobs and other opportunities.

- Continuing to advocate on behalf of the Commonwealth that Virginia has the port infrastructure, supply chain, workforce resources, strategic location, and *can-do* spirit that make Virginia the ideal host and partner for offshore wind developers.
- Collaborating with the Department of Environmental Quality and other agencies to determine how offshore wind development can contribute to Virginia's implementation of the Clean Power Plan.

APPENDIX A

MISSION STATEMENT AND OBJECTIVES

Virginia Offshore Wind Development Authority

Objectives

Mission Statement

The Virginia Offshore Wind Development Authority (the "***Authority***") is created as a political subdivision of the Commonwealth for the purpose of facilitating, coordinating, and supporting the development (either by the Authority or by other qualified entities) of the offshore wind energy industry, offshore wind energy projects, and supply chain vendors by:

A. Collecting relevant metocean and environmental data;
B. Identifying existing state and regulatory or administrative barriers to the development of the offshore wind energy industry;
C. Working in cooperation with relevant local, state, and federal agencies to upgrade port and other logistical facilities and sites to accommodate the manufacturing and assembly of offshore wind energy project components and vessels; and
D. Ensuring that the development of such wind projects is compatible with other ocean uses and avian and marine resources, including both the possible interference with and positive effects on naval facilities and operations, NASA-Wallops Flight Facility operations, shipping lanes, recreational and commercial fisheries, and avian and marine species and habitats.

The Authority shall, in cooperation with the relevant state and federal agencies as necessary, recommend ways to encourage and expedite the development of the offshore wind energy industry.

The Authority shall also consult with research institutions, businesses, nonprofit organizations, and stakeholders as the Authority deems appropriate.

The Authority shall consider seeking grant and/or loan guarantees and/or entering into public-private partnerships to assist in the development of offshore wind.

The Authority shall provide two reports: 1) by May 31, 2011, a report on its recommendations on what is needed to facilitate the transmission of the offshore wind-generated power after review of the transmission study prepared by the investor-owned utility, Dominion Virginia Power; and 2) by October 15 each year, an annual summary of the activities of the Authority and policy recommendations to the Governor, the Chairs of the House and Senate Commerce and Labor Committees and the Chairs of the House Appropriations and Senate Finance

Objectives

Committees (the "Annual Report"). The Annual Report shall include specific policy recommendations that shall be derived from and supported by the actions, results, and deliberations of the Authority in carrying out its objectives listed below.

A. <u>Virginia Offshore Industry Data:</u> Facilitate the definition, collection, dissemination of relevant metocean data, environmental data, and other information needed by Virginia offshore wind stakeholders, utilizing existing, planned, or projected sources of data collection or activities.

1. Direct and provide support to the Virginia Department of Mines, Minerals and Energy (DMME) to gather, reconcile and disseminate information and data required for the development of the offshore wind industry and offshore wind facilities. Specifically, develop a strategy and action plan to:

    a. Inventory the available information (e.g. wind data, environmental data, oceanographic data, sea current data, electricity transmission data, port and shipping data, DOD/Navy Coast Guard requirements, integration of the Chesapeake Light Tower, offshore LIDAR buoy data, wind turbine construction and operating cost data, etc.);
    b. Gather stakeholder input regarding what information is required to support the offshore wind industry;
    c. Reduce gaps in information required versus information collected[1];
    d. Collect, process and disseminate this information to stakeholders; and

2. Collect, monitor, and provide information regarding the delivered cost, rate impact, economic impact, and environments benefits of electricity generated from offshore wind projects that considers existing studies, legislative and regulatory actions by the Commonwealth, federal government and other states, and information provided by stakeholders and interested parties;

3. Review, support/endorse and possibly participate in federal grant applications and state efforts that support projects that will improve the offshore wind value chain to shorten completion times, reduce the delivered cost of power, and create job opportunities.

[1] Note that the Department of the Interior plans to make available to lessees available federal data at the time of the lease sale for offshore wind

Objectives

B. <u>Offshore Leasing, Permitting, Financing, and Regulation:</u> Identify existing federal and state barriers to the development of the offshore wind industry in Virginia.

1. Define, identify and provide information regarding:

    a. Virginia's renewable energy goals with respect to offshore wind as well as state and federal incentives for renewable energy development;
    b. The current federal and state regulatory framework for the development, transmission, generation and purchasing power for offshore wind in Virginia;

2. Develop a process to gather and validate stakeholder input regarding perceived and/or real federal and state regulatory and administrative barriers to the development of the offshore wind industry in Virginia and work with stakeholders to create action plans or strategies to remove or reduce those barriers.

3. Incorporate results of these findings into the Annual Report.

C. <u>Virginia Offshore Job Creation & Supply Chain Development:</u> Work in cooperation with relevant local, state, and federal agencies to accommodate the manufacturing, assembly, and maintenance of offshore wind energy project components and vessels.

1. Support the Virginia Economic Development Partnership (VEDP) to:

    a. Assess the competitiveness of Virginia for the location of manufacturing, assembly, portage, and service centers to support the offshore wind industry;
    b. Define and implement strategies to attract industry to locate facilities in Virginia that will support the manufacturing, assembly, service and transport resources required by the industry participants; and
    c. Address the training and human resource requirements and the mechanism to provide the necessary human resources.

2. Consider incentives and/or policy initiatives needed to attract offshore related business to Virginia so as to create employment opportunities and balance the delivered cost of offshore wind and incorporate any recommendations regarding those incentives/policy initiatives into the Annual Report.

Objectives

D. <u>Offshore Wind Project Siting and Development:</u> Communicate and coordinate with stakeholders, including the Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEMRE) Task Force to ensure that the development of offshore wind projects is compatible with other ocean uses and avian and marine resources, including both the possible interference with and positive effects on naval facilities and operations, NASA-Wallops Flight Facility operations, shipping lanes, recreational and commercial fisheries, and avian and marine species and habitats.

1. Provide input and support to the Virginia BOEMRE Task Force in their ongoing communication with local, state, tribal, and federal stakeholders concerning the compatibility of offshore wind projects with other ocean uses.

2. Encourage the development of a strategic plan regarding the development and use of the offshore waters of Virginia for wind generation and other uses (recreation, defense, oil and gas exploration, shipping, etc.), using the principles of coastal and marine spatial planning.

APPENDIX B

2016 VOWDA BOARD MEMBERS

VIRGINIA OFFSHORE WIND DEVELOPMENT AUTHORITY
BOARD MEMBERS
2016

Robert Matthias, Chair
Assistant to the City Manager
VA Beach City Manager's Office

Joan Bondareff, Vice Chair
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Deborah E. Miller
Principal
Green Strategy Associates

Arthur W. Moye, Jr.
Executive Vice President
Virginia Maritime Association

Varun Nikore
Virginia Commercial Space Flight Authority Representative
Managing Director
Red Fort Strategies

Brian Redmond
Managing Director
Paragon Asset Group, LLC

Ronald Rosenberg
Chancellor Professor of Law and Associate Dean for Academic Affairs
William & Mary Law School

APPENDIX C

GOVENOR'S WIND AND SOLAR ENERGY COALITION LETTER TO PRESIDENT OBAMA

Governors' Wind & Solar Energy Coalition

2200 Wilson Boulevard, Suite 102-22
Arlington, Virginia 22201-3324
Phone 402 651-2948
www.GovernorsWindEnergyCoalition.org

September 19, 2016

The Honorable Barack Obama
President of the United States
The White House
Washington, DC 20500

Dear Mr. President:

We write as a governor of a state with a long history of innovation and success in the wind industry and a governor of a state poised for tremendous economic and energy benefits of offshore wind energy. As the leaders of the Governors' Wind & Solar Energy Coalition, a bipartisan group of the nation's governors representing states from coast to coast, we agree that wind and solar energy development address many of our states' and the nation's important needs such as job creation, economic development, reliable and low cost energy, and cost-effective emission reductions. We also agree that one of the best ways to meet the nation's energy needs is to expand domestic wind and solar energy production and harvest their economic and environmental benefits.

We write to you today to suggest actions that your Administration can take to expand our states' wind and solar energy production.

We appreciate your dedication to wind and solar energy development and your willingness to work with us and Congress to implement our previous suggestions, such as the multi-year extension of the renewable energy production and investment tax credits, support for DOE's Wind Vision Report, and efforts to streamline offshore wind development and auction leases, and ongoing research and development activities that supplement the the private sector's significant investments. The Coalition's collaboration with your Administration can bring even more value to our states if you consider the following actions to develop our states' and the nation's wind and solar resources:

- ***Expedite the Deployment of Offshore Wind***

Offshore wind is an abundant source of renewable energy located near some of our nation's largest cities and areas of electricity demand, but the nation still has only one project under construction off the coast of Rhode Island that recently completed construction and will be placed in service later this year. Europe currently has 11 GW of offshore wind installed. A new U.S. offshore wind sector could create thousands of jobs in businesses ranging from R&D and engineering to manufacturing and marine construction.

The states' offshore wind industry will not grow without a policy foundation that enables deep water wind development and signals that the nation is serious about offshore development. Indeed, not a single offshore wind facility in the U.S. has yet become operational and, therefore, been able to take advantage of the existing tax incentive. We appreciate the Bureau of Ocean Energy Management's (BOEM) efforts to streamline the leasing and permitting process and suggest that the following additional steps be taken:

First, we are concerned about the recently finalized Atlantic Coast Port Access Route Study (ACPARS) from the Coast Guard. It is not clear that the approaches detailed in ACPARS properly balance the multiple uses of the ocean. We urge your Administration to find a pathway between the Coast Guard and BOEM that allows for the offshore wind industry to move forward and that includes robust collaboration with the states.

Second, we urge your Administration to further streamline the offshore wind energy permitting process, including improving the coordination with and timeliness of responses from agencies outside of BOEM that are involved in the review of offshore wind projects. Reasonable deadlines for agency actions need to be set and met.

- ***Improve Permitting Collaboration Efforts***

It is very difficult to permit wind and solar projects on public lands, as evidenced by the fact that more than 98 percent of the currently installed wind energy capacity is on private lands. We are also concerned that the U.S. Fish and Wildlife Service (FWS) is adding uncertainty and unnecessary delays in permitting, which can impact projects in developing and operating facilities on both on public and private lands. To help address these issues, we urge your Administration to:

First, ensure that the FWS does not broaden legal liability for the private sector under the *Migratory Bird Treaty Act* (MBTA), including wind and solar facilities, without having a workable general permit process to provide protection from the liability.

Second, the FWS recent release of draft revisions to the 2009 eagle take permit rule released earlier this year included several improvements represent progress toward a more workable permit program. But additional changes are necessary. We urge the Administration to continue working with the wind and solar industries, conservation groups, states and other stakeholders to ensure the final rule is workable while continuing to protect eagles.

Third, BLM will soon release a proposed rule that would change the existing right-of-way grant and rental fee process for wind and solar development into a competitive leasing process. While we understand the motivation to move in this direction, we urge your Administration to address the many concerns raised by the private sector that could limit wind and solar development on public lands.

We believe these steps will further advance the development of the nation's wind and solar energy resources. We look forward to working with you and your Administration to further our states' and the nation's renewable energy development.

Sincerely,

Terry E. Branstad
Chairman and
Governor of Iowa

Gina M. Raimondo
Vice Chairman and
Governor of Rhode Island

cc:

Member Governors

Members, Senate Energy and Natural Resources Committee

Members, House Energy and Commerce Committee

The Honorable Ernest Moniz, Secretary, U.S. Department of Energy

The Honorable Sally Jewell, Secretary, U.S. Department of the Interior

The Honorable Brian Deese, Assistent to the President

The Honorable Christy Goldfuss Chairman, White House Council on Environmental Quality