Annual Report

October 15, 2012

Contents

I. Executive Summary

In 2010, the General Assembly established the Virginia Offshore Wind Development Authority ("VOWDA" or "the Authority"). The members were appointed and the Authority began meeting in December 2010. Legislation introduced and approved April 4, 2012 [Chapter 502], amended the membership from eleven to nine non-legislative citizen members appointed by the Governor and made it so members will serve staggered terms. In addition, one ex-officio member, without voting privileges, will be selected by the Governor after consideration of the persons nominated by the Secretary of the Navy.

In 2012, the Authority continued work on its four main goals and updated its annual work plan to accomplish those goals and objectives.

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, including the Department of the Interior Bureau of Ocean Energy Management, Regulation, and Enforcement (DOI BOEMRE, subsequently renamed BOEM) Task Force 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 the Bureau of Ocean Energy Management (BOEM) to help facilitate the issuance of the Call for Information and Nominations for Commercial Leasing in the Wind Energy Area off the coast of Virginia and the draft of the Proposed Sale Notice. The Authority supported efforts by Virginia Coastal Energy Research Consortium (VCERC) and BOEM to resolve potential conflicts with the Department of Defense

and the commercial maritime industry in the definition of Virginia's Wind Energy Area (WEA). Further, the Authority supported DMME's partnership with BOEM to collect geophysical data in Virginia's WEA and DMME's application for two research leases that will help facilitate the collection of additional met-ocean and environmental data.

VOWDA monitored federal and state activity related to the development of offshore wind and commented on activities related to proposed auction formats, and the request for competitive interest and right-of-way application for a major transmission line designed to provide transmission onshore up and down the Northeast and Mid-Atlantic Coast. The Authority also stayed abreast of the activities being conducted by VCERC and provided input into the development of a website that is designed for sharing geospatial data. The website provides the opportunity to take a closer look at actual wind behaviors and estimate actual energy production, with easy access links to real time hourly data for wind shear, air temperatures, air density, etc. The website also hosts an enhanced VOWDA webpage where all studies, resources, minutes from meetings, etc. can be easily accessed by the public.

Finally, the Authority received presentations throughout the year regarding updates to the 2010 Meteorological Tower Placement Report, progress on upgrading the Chesapeake Light Tower and its importance in Virginia WEA Resource Assessment, transmission solutions studies, private development of a facility to test and certify offshore and land-based turbine generators in the United States and other private interest in developing offshore wind off the coast of Virginia and the associated challenges. The Authority has analyzed this information to determine the appropriate next steps for Virginia in continuing to facilitate private development of offshore wind energy, provide reasonably priced energy, and develop an offshore wind industry, supply chain, and job creation for Virginians.

As a result of its activities this year, the Authority makes the following priority recommendations:

RECOMMENDATION 1: **Support industry request to provide state funding to match private and other investments in the design, permitting, and installation of buoys, structures, and equipment that will facilitate the collection of met-ocean data / or pre-construction development costs and construction of met towers.**

RECOMMENDATION 2: **Establish a low-interest revolving loan fund to provide funding for private investment in the collection of additional met-ocean and environmental data to support lowering the cost of**

development of an offshore wind project in Virginia's Wind Energy Area.

RECOMMENDATION 3: **That any agreement for port privatization preserve no- or low-cost access to port land and facilities to maintain Virginia's competitive advantage to attract and develop an offshore wind energy industry and supply chain.**

ADDITIONAL RECOMMENDATIONS:

1. Support the extension of the federal Investment Tax Credits and Production Tax Credits.
2. Continue to support BOEM in its efforts to release the proposed sale notice off the coast of Virginia and conduct an auction of the lease blocks in Virginia's WEA as expeditiously as possible.
3. Support efforts for successful completion of an advanced technology demonstration project. Work with federal and state agencies to ensure efficient permitting of demonstration projects.

II. Mission

In 2010, the Virginia Offshore Wind Development 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 vendors, including:

- Collecting relevant metocean and environmental data,
- Identifying existing state and regulatory or administrative barriers to the development of the offshore wind energy industry,
- 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
- Ensuring that the development of such 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.

Legislation introduced and approved April 4, 2012 [Chapter 502], amended the membership from eleven to nine non-legislative citizen members appointed by the Governor. In addition, one ex-officio member, without voting privileges, will be selected by the Governor after consideration of the persons nominated by the Secretary of the Navy[1]. To maintain continuity of operations by ensuring all appointments do not expire in the same year, six of the initial appointments will serve terms of less than four years. Three inaugural members were appointed for the full four years; three members are appointed for terms of three years; and three members for terms of two years. Thereafter all appointments shall be for staggered terms of four years.

VOWDA has a fairly broad authority to accept, hold, invest and administer moneys, 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 Director of the Authority, and DMME serves as staff to the Authority.

The legislation also requires the Authority to provide a report on its recommendations on what is needed to facilitate the transmission of offshore wind-generated power after review of the transmission study prepared by the investor-owned utility Dominion; and 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.

III. Summary of 2012 State Activities

The Authority identified four main goals and developed an annual work plan to accomplish those goals and objectives.

1. Virginia Offshore Industry Data: Facilitate the definition, collection, and dissemination of relevant metocean data, environmental data, and other information needed by

[1] The additional non-legislative citizen member and the one ex-officio member selected from the list provided by the Secretary of the Navy was added by legislation passed during the 2012 General Assembly session which went into effect on July 1, 2012. Therefore, those members have not served on the Authority to date. They are in the process of being appointed.

Virginia offshore wind stakeholders, using existing, planned, or projected sources of data collection 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, including the Department of the Interior Bureau of Ocean Energy Management, Regulation, and Enforcement (DOI BOEMRE, subsequently renamed BOEM) Task Force 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.

In order to accomplish these goals, the Authority established specific objectives to assist with coordination with the BOEM Task Force to facilitate issuance of the Call for Information and Nominations for Commercial Leasing in the Wind Energy Area off the coast of Virginia; engage with other groups interested in offshore wind development in Virginia; determine existing barriers and possible solutions; identify data availability and needs; research policy initiatives on the state and federal level and determine whether changes are needed; identify potential grants and other funding sources available to support offshore wind development; and assess and raise awareness of the regulatory structure in Virginia. To accomplish these objectives, the Authority put into place a comprehensive work plan. A copy of the Authority's Mission Statement, Objectives, and Work Plan can be found in **Appendix A**.

The remainder of this section reports on offshore wind development activities undertaken at the state level from October 1, 2011 to September 30, 2012. Federal actions affecting Virginia offshore wind are reported in Section IV.

Resolving Maritime Stakeholder Issues Around the Virginia Wind Energy Area

The following activities took place largely in August 2011 but given the sensitivity of the issues involved and uncertainties surrounding their potential resolution at this time last year, they were not described in last year's VOWDA Annual Report. They also have established strong collaborative sub-sets within the maritime stakeholder community whose work continued well

into the fall, and those relationships continue to have value today. These activities were undertaken by VCERC with funding support from DMME.

In the Draft Environmental Assessment (EA) for "Commercial Wind Lease Issuance and Site Characterization Activities on the Atlantic Outer Continental Shelf Offshore New Jersey, Delaware, Maryland, and Virginia" published by BOEM in July 2011, Alternative E would have excluded eight full lease blocks down the middle of the Virginia Wind Energy Area (WEA). This alternative was proposed to address a comment by the American Waterways Operators (AWO) about potential conflict with inclement weather diversion areas for coastwise barge traffic off Virginia, which the AWO had submitted in response to the February 2011 Notice of Intent (NOI) to prepare this EA.

In reviewing the original AWO comment letter, VCERC noted some internal inconsistencies and convened a meeting with two barge captains, port operations managers from two towing companies, and representatives from the Virginia Maritime Association in order to correctly identify the actual inclement diversion routes. As a result, the AWO submitted a revised comment letter to BOEM on August 22, 2011. In the Final EA published in January 2012, Alternative E was revised to NOT exclude the eight blocks down the middle of the Virginia WEA, which originally (and incorrectly) had been suggested for inclement weather diversion routing, but instead removed blocks from the western end of Alternative A, which preserves the actual inclement weather diversion routing for coastwise barge traffic and also protects the natural southwest-to-northeast channel for deep-draft vessels exiting or entering the Southern Approach of the Chesapeake Bay Entrance Traffic Separation Scheme (TSS).

In parallel, VCERC also worked with the maritime stakeholder community to facilitate a discussion between the U.S. Coast Guard (USCG) and the Office of the Secretary of Defense (OSD) that would address the potential barrier to development of the Virginia WEA that would be posed by the Dam Neck Live Fire Range Danger Zone as presently configured in 46 CFR §334.390. Although the CFR allows commercial vessel transits through this Danger Zone, AIS data show that most vessels exiting or entering the TSS Southern Approach avoid this area, taking paths through the proposed Virginia offshore WEA, which would put them in direct conflict with commercial offshore wind development there.

Resolving this potential conflict through the USCG Atlantic Coast Port Access Route Study (ACPARS) process, OSD is now considering relinquishment of the northwest corner of the Dam Neck Danger Zone such that a vessel traffic fairway can be established as an extension of the Southern Approach TSS, in exchange for the Navy's seaward expansion of this training area farther to the south. This would encourage vessels to transit the region they now are avoiding, which will enable more direct routing between the Port and ocean routes to the south, which

will help the Port compete more effectively for traffic from the newly expanded Panama Canal, and it will improve the safety and scheduling of Navy training exercises by helping prevent the transit of commercial vessels farther south into the Dam Neck Danger Zone.

Figure 1 is a nautical chart view of the Virginia WEA as published in the BOEM Call for Information and Nominations in February 2012, showing the three maritime stakeholder issues that have been or are being resolved as a result of the above activities. The responses to the Call are described under the next sub-heading.

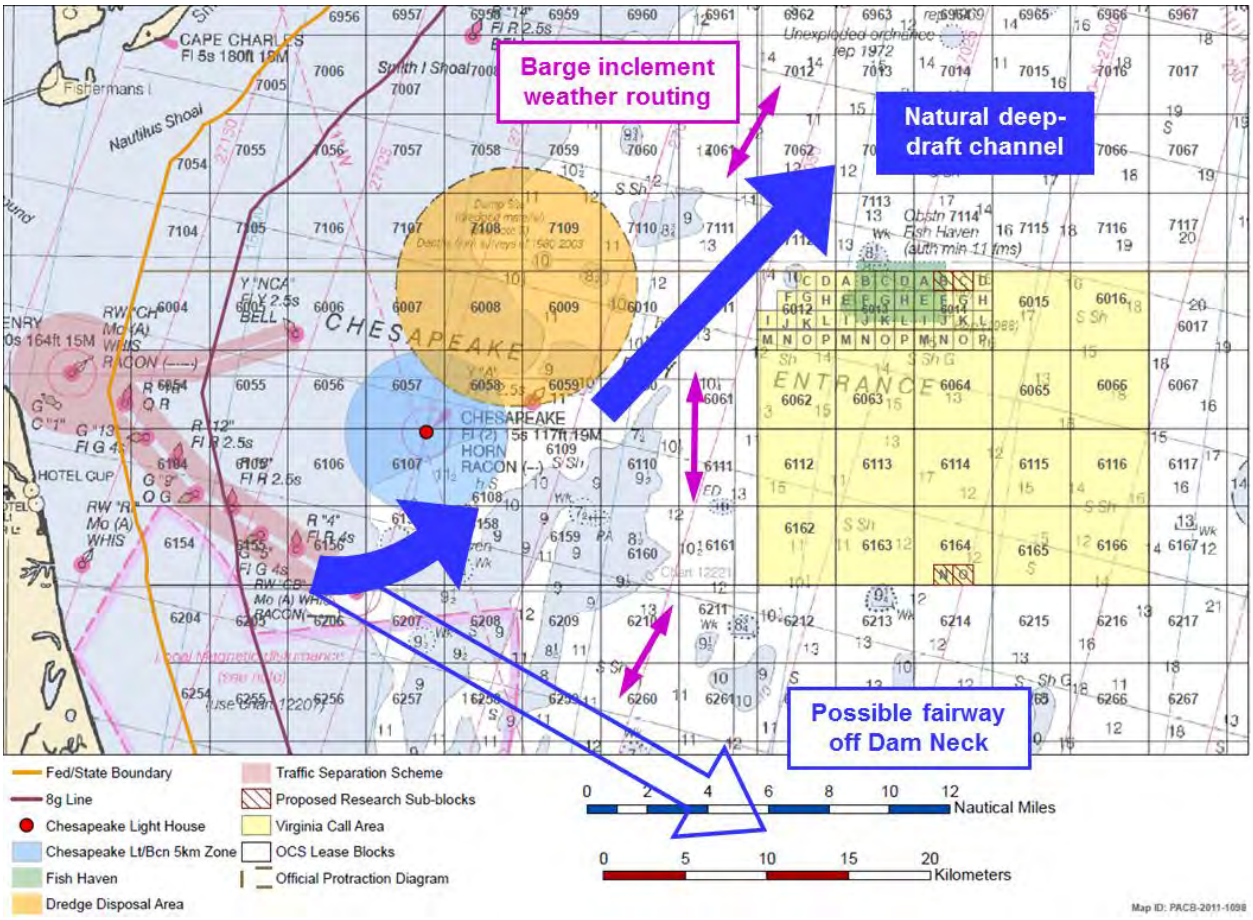


***Figure 1**. Nautical Chart View (mariner's view) of Virginia WEA as published in February 2012 in the BOEM Virginia Call for Information and Nominations.*

Virginia Call for Information and Nominations

The Bureau of Ocean Energy Management (BOEM) published the Virginia Call for Information and Nominations (Call) in the *Federal Register* on February 3, 2012, with a 45-day public comment period that closed on March 19. The Call, a full-page map of the Virginia Call Area, and a complete listing with maps of the eight expressions of commercial interest are provided as **Appendix B** to this report. Ten public comments were submitted by the closing date and are posted at www.regulations.gov/#!searchResults;rpp=25;po=0;s=BOEM-2011-0093.

The eight expressions of commercial interest in the Virginia WEA are tabulated and mapped in Figure 2. Four companies expressed commercial interest in nominating the entire WEA, and three others expressed interest in nearly the entire WEA. One company expressed limited interest in just the three lease blocks nearest to shore.

Company	**Description of Nomination**
Apex Virginia Offshore Wind, LLC	Entire Virginia WEA *except* fish haven in 6013 and 6014
Arcadia Offshore Virginia, LLC	Entire Virginia WEA
Cirrus Wind Energy, Inc.	Three blocks: 6062, 6112, 6162
Dominion Resources, Inc.	Entire Virginia WEA
enXco Development Corporation	Entire Virginia WEA
Fishermen's Energy, LLC	Entire Virginia WEA *except* DMME Research Lease
Iberdrola Renewables, Inc.	Entire Virginia WEA
Orisol Energy US, Inc.	Entire Virginia WEA *except* 6012, 6013, 6014

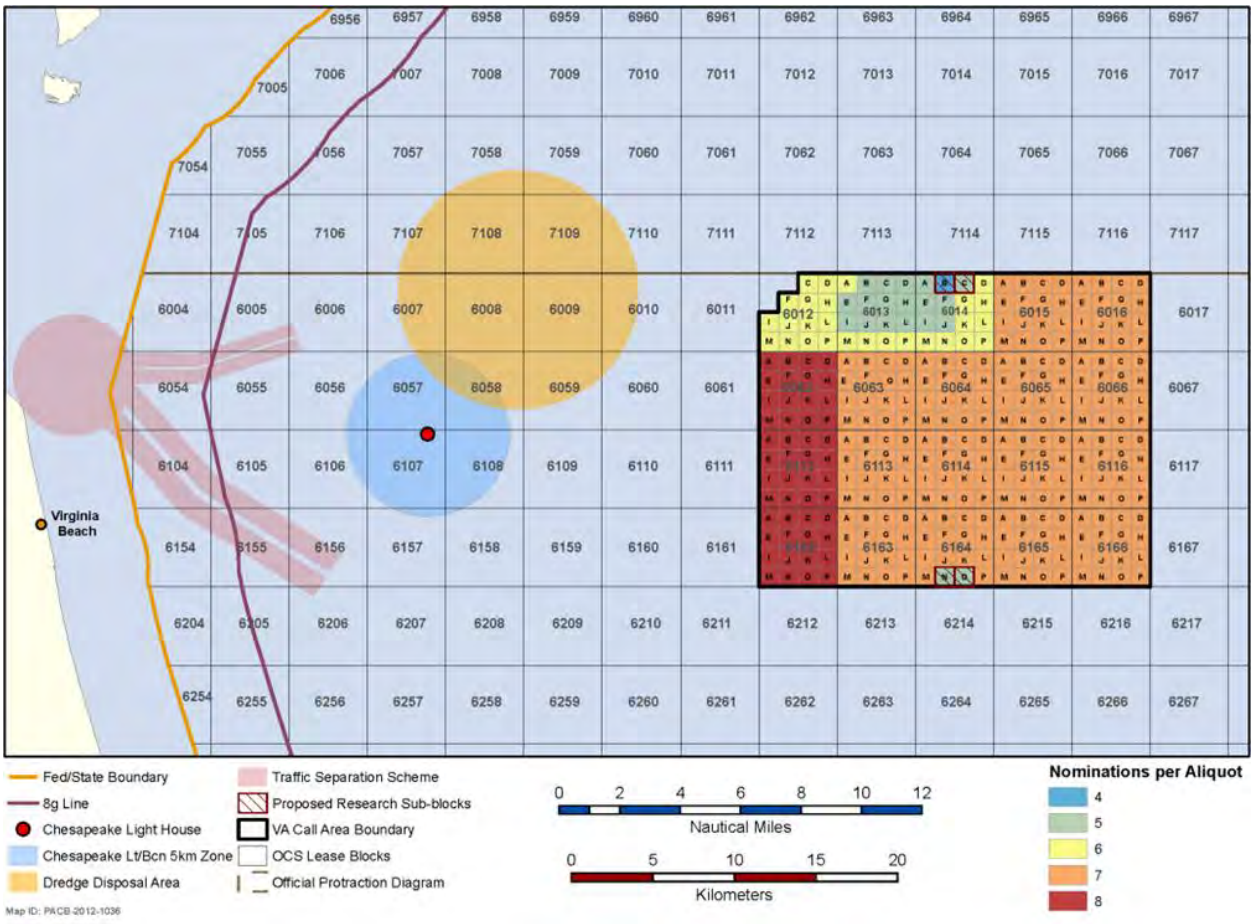


***Figure 2**. Table of nominations and map of nomination density among eight expressions of commercial interest in the Virginia Call area. The group of sub-blocks shaded pale green in 6013 and 6014 encompass a submerged fish haven. The two pairs of sub-blocks with red diagonal cross-hatching are identified in a DMME research lease application to site two metocean and environmental monitoring platforms, one located along the northern edge of the Call area and one located along the southern edge.*

DMME Applications for Two Research Leases

Virginia submitted its first research lease application in January 2011, which envisioned two types of activities: metocean and environmental monitoring of the commercial WEA, and the siting of test turbines outside the commercial WEA. After consultation with maritime industry stakeholders, the original turbine testing sub-blocks were moved, and a revised application, submitted by DMME in September 2011, identified a new set of sub-blocks for turbine testing. Because the metocean and environmental monitoring sub-blocks were within the commercial WEA, BOEM suggested that the turbine testing sub-blocks be withdrawn from the revised application, which then would be solely focused on metocean and environmental monitoring, and that a separate, second application be submitted for a turbine testing lease.

On June 1, 2012, DMME submitted its final, unsolicited application to BOEM for a research lease, as allowed by 30 CFR Part 285, Section 238, to site two metocean and environmental monitoring platforms within the Virginia Call area. Designated as "Research Lease Number 1," this application proposes four sub-blocks to be leased for the siting of two metocean and environmental monitoring platforms along the northern and southern edges of the Call area for pre-and post-construction monitoring of wind velocities, water levels, waves, avian and marine mammal activities, and vessel traffic within and around the Virginia WEA.

The main change to this application, as compared with the revised application submitted on September 6, 2011, is that the "Area Requested for Lease" was changed to withdraw all nine sub-blocks that had been identified for Turbine Testing in that application, and to delete all associated text. BOEM suggested that DMME submit a new unsolicited application for a second research lease dedicated to Turbine Testing, which is described below.

The two monitoring platforms to be sited on DMME Research Lease Number 1 will be identical in design and construction, enabling economies of serial fabrication and offshore equipment mobilization and demobilization for their installation. The two towers also will have identical payloads, enabling quantity discounts in ordering instrumentation and power supplies.

BOEM rules place a priority on commercial development over research activities. The activities to be accomplished on Research Lease Number 1 will facilitate commercial development by reducing wind resource uncertainties and validating operational metocean forecast models required for planning commercial installation and servicing activities. All of the commercial developers who responded to the BOEM Virginia Call indicated that they did not object to DMME's proposed siting of met towers on the four sub-blocks named in this application.

On July 23, 2012, DMME submitted its complete, unsolicited draft application for Research Lease Number 2, proposed primarily for turbine testing, but also useful for testing metocean and environmental monitoring equipment, due to its proximity to the Chesapeake Light Tower. The Research Lease Number 2 site was identified by consensus after a series of meetings and conference calls among members of the BOEM Virginia Intergovernmental Task Force and maritime industry stakeholders that took place between November 2010 and March 2012, concurrent with designation of the Virginia WEA, as described earlier in this section.

As shown in Figure 3, Research Lease Number 2 is located approximately 15 km southeast of the Chesapeake Light Tower (CLT). It appears likely that the U.S. Department of Energy will fund the structural refurbishment of the CLT to serve as a Reference Facility for Offshore Renewable Energy (RFORE) which would include installation of a conventional anemometer mast that would have wind speed and direction sensors up to 100 m above sea level.

Research Lease Number 2 is thus well positioned for short-term testing and validation of prototype metocean sensors and environmental monitoring equipment that then can be deployed long-term on "production" platforms located farther offshore on the sub-blocks of Research Lease Number 1. This includes short-term testing and validation of important meteorological and environmental monitoring technologies needed for "before and after" characterization of the Virginia Call area, including:

a. Long-range volume-scanning LiDAR,

b. Marine-band radar for monitoring avian activity,

c. Combined marine radar and Automatic Identification System (AIS) monitoring for characterizing the full population of vessel traffic, and

d. Passive acoustic sensors for monitoring marine mammal activity.

The next step for both DMME research lease applications is for BOEM to issue a Request for Competitive Interest, to determine if any other entities legally qualified to hold a Section 238 lease also have competing interest in conducting research on these sub-blocks. Both Research Lease Applications are included in **Appendix C** of this report.

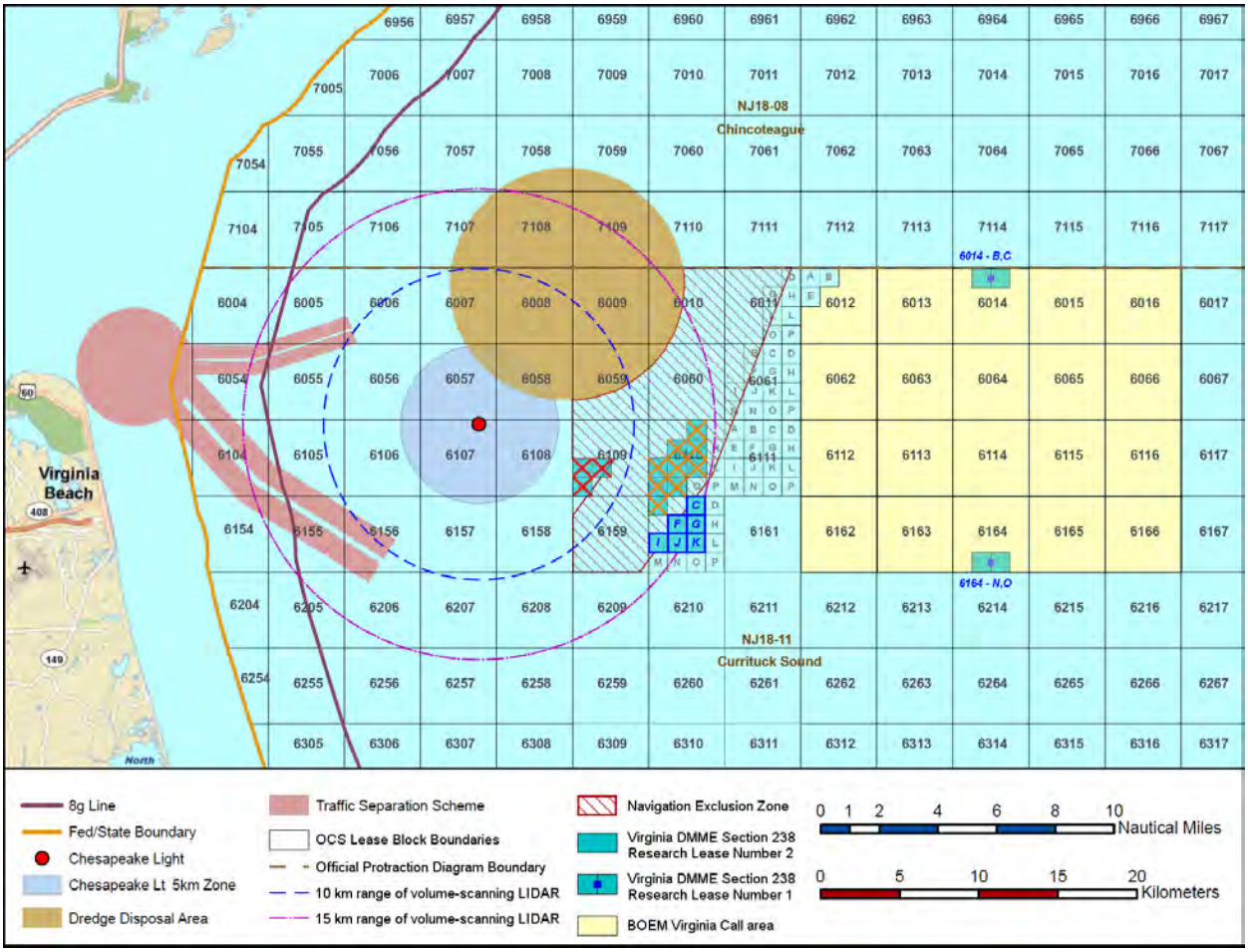


Figure 3. *Map showing six sub-blocks located in Block 6160, which are proposed by DMME for Turbine Testing in its unsolicited application for Research Lease Number 2. Red and orange "X" symbols indicate Turbine Testing sub-blocks withdrawn from earlier applications, Also shown on this map are the two pairs of sub-blocks that comprise Research Lease Number 1 in Blocks 6014 and 6164, which are proposed by DMME for Metocean and Environmental Monitoring of the commercial Call area.*

Draft Proposed Sale Notice for the Virginia WEA

BOEM convened its fourth in-person Virginia Offshore Renewable Energy Task Force meeting on June 5, 2012, at Old Dominion University in Norfolk, and the main topic of discussion was the Draft Proposed Sale Notice (PSN) for the Virginia WEA. The draft PSN was consistent with DMME's response to BOEM's Auction Format Information Request (AFIR) submitted in January 2012 (see next section), which recommended that the Virginia WEA be auctioned as a single lot.

BOEM requested Task Force feedback on the draft PSN, and DMME continued to support the single-lot approach, for the following reasons:

- A single lot auction format, if the lease term is long enough, could enable a single development team to learn from one phase to the next, and thereby reduce the capital cost and cost of energy as the WEA is built out.

- Phased development of a single, large lease could ensure a steady market demand for turbines, foundation support structures, and array cables. This would have a greater chance of attracting capital investment in a domestic supply chain for these components, whereas multiple leases would almost ensure that these components must be imported, as no individual lease would be large enough to support investment in new manufacturing facilities.

- Together with the learning benefits of phased development, the attraction of domestic supply chain investment would have a large impact on reducing the cost of offshore wind energy. The high cost of offshore wind energy remains a market barrier, and the above-described benefits of a single-lot format will help overcome this barrier.

VOWDA took no formal position on the proposed single lot auction as its members were divided over the benefits and disadvantages.

DMME and VOWDA Comments

VOWDA and DMME submitted letters of comment to BOEM, on three topics. For each topic, the complete *Federal Register* notice and corresponding comment letters are included in the appendices noted parenthetically, below:

- "Request for Information on the State of the Offshore Renewable Energy Industry—Auction Format Information Request (AFIR)," which posted in the *Federal Register* on December 6, 2011, with a 45-day comment period closing on January 20, 2012. (**Appendix D**)

- "Commercial Renewable Energy Transmission on the Outer Continental Shelf (OCS) Offshore Mid-Atlantic States, Notice of Proposed Grant Area and Request for Competitive Interest (RFCI) in the Area of the Atlantic Wind Connection Proposal," which posted in the *Federal Register* on December 21, 2011, with a 60-day comment period closing on February 21, 2012. (**Appendix E**)

    - In a letter from Atlantic Wind Connection CEO Robert Mitchell, distributed to VOWDA at its February 15, 2012, meeting, AWC requested VOWDA's support for its proposed cable network for the mid-Atlantic region. VOWDA's comments to BOEM reflect the need to encourage and keep options open in Virginia for all

transmission connections and that the interconnection cable should provide for the lowest cost of delivered power to Virginia residents and accelerate, not delay, the development of wind farms in the Virginia WEA. (**Appendix E**)

- "Right-of-Way Grant of Submerged Lands on the Outer Continental Shelf to Support Renewable Energy Development," which posted in the *Federal Register* on August 29, 2012, with a 30-day comment period closing on September 28, 2012. (**Appendix F**)

Dominion Offshore Interconnection Study

In February 2012, Dominion contracted with ABB Power Systems Consulting to determine the feasibility of designing, constructing, operating, and maintaining submarine cable-based interconnection facilities for offshore wind resources along the Atlantic coast. This report is a follow up to Dominion's previous Virginia Offshore Wind Integration Study completed in 2010.

The study looked at the costs and feasibility for both alternating current (AC) and high voltage direct current (HVDC) systems and determined the most economical approach would involve four offshore substation platforms and two 230-kV AC cables per platform developed in phases as wind power projects are built out. Each substation platform and associated collection and export cables would have the capacity to bring 648 MW to shore.

Although an HVDC interconnection requires fewer cables than the recommended 230-kV AC alternative, the relatively close proximity of the Virginia WEA to shore and the significant additional costs for offshore and onshore HVDC converter stations make the AC option more economical.

The complete Dominion Offshore Wind Integration Study can be found at https://www.dom.com/news/2012/pdf/dominion_offshore_public_report_3-13-2012.pdf.

DMME FY2013 Funding to Accelerate and Assist Private Development of the Virginia WEA

The Governor's FY13 Executive Budget included $500,000 for research and data collection to assist and accelerate private development of Virginia's offshore wind resource, which was allocated to three activities:

1. $300,000 -- DMME used this funding to leverage another $300,000 in matching funds from BOEM in order to conduct a geological survey of the Virginia WEA on the Outer Continental Shelf. DMME has issued an RFP for this survey work that will close October 17, 2012. The survey will support activities proposed in DMME's two offshore wind energy research lease applications and future activities of commercial developers. The objectives of this regional geophysical study are to provide critical information to:

a. Provide insight to seafloor and subsurface variability and how the conditions and variability will affect substructure and foundation optimization and standardization, and by extension serialized fabrication and production economics,

b. Optimize platform design selection (e.g., substructure and foundation type) and micro-siting of metocean measurement and environmental monitoring platforms on DMME Research Lease Number 1, as well as potential test turbines for a Virginia offshore wind demonstration project, and

c. Ultimately to accelerate commercial leasing and development of the Virginia Call area.

2. $100,000 – DMME agreed to match a federal competitive grant, if there is an award to a Virginia proposal, to demonstrate advanced technology associated with offshore wind energy generation.

3. $100,000 – DMME has contracted with Virginia Tech Advanced Research Institute for technical support related to DMME and VCERC participation on the BOEM Intergovernmental Task Force, including review of the Proposed Sale Notice when released for public comment and development of lease terms and stipulations for ensuring compatibility with defense, aerospace, maritime, fisheries, and recreational activities; continued support of DMME's application and management of two research leases; review of offshore geological survey proposals and technical support of DMME management of survey activities, including review of survey deliverables; and other technical support activities that will accelerate and assist commercial development of the Virginia WEA and attract offshore wind supply chain investment to Virginia.

James Madison University Science and Regulatory Studies

The multi-partnered effort entitled "Virginia Offshore Wind Advanced Technology Demonstration Site Development" was funded by DMME with support through the American Recovery and Reinvestment Act of 2009 and was designed to facilitate siting and development of one or more wind turbines in state waters. The results of this project were intended to guide the development of one or more test beds at which large turbine(s) could be installed and operated in order to test new and advanced technologies, novel techniques for installation, and mitigation methods that address potential conflicts. This effort was consistent with priorities set by the U.S. Department of Energy to reduce the levelized cost of electricity associated with offshore wind power.

The Draft Virginia Offshore Wind Advanced Technology Demonstration Site Development report is available, as are most appendices, on the VOWDA website [http://wind.jmu.edu/offshore/vowda]. There are still some elements to be completed or revised including the Executive Summary, two Technical Appendices, and Outreach Documents, and a final analysis from WeatherFlow to round out a 12-month period of modeling and analysis to be incorporated into the report. This report provides two principal contributions to the ongoing development and evolution of the offshore wind industry in Virginia and the United States, and thus is organized into two volumes: Volume I – Project Pre-Development and Volume II – Offshore Wind Development Tools and Resources.

The first volume addresses the pre-development of an Advanced Technology Demonstration Project by focusing, in four sections, on the key areas of effort that are critical to the earliest stages of development: site selection and concept development; stakeholder engagement; preliminary engineering and interconnection; and regulatory permitting. This volume provides a comprehensive assessment of the three sites chosen, all in state waters – in the James River near the former Suffolk campus of the Tidewater Community college, at Newport News Point near the wave screen, and on the east side of the Chesapeake Bay Bridge Tunnel near the northern end. The outcomes presented in this volume and accompanying appendices provide the basis from which to advance permitting, design, and construction at any of the three sites.

The second volume provides critical information pertaining to the wind and water resources at these sites and throughout state and federal waters off the Virginia coast. This volume presents a met-ocean design environment characterization of Virginia waters; an events-based analysis and meteorological modeling of Virginia coastal and offshore winds; a meso-modeling of the wind resource with estimated energy production of sample wind turbines; a collection of outreach materials pertaining to this project and future development of offshore wind; and a description of the data management strategies employed. These outreach materials include interactive web-mapping tools for examining available and relevant GIS data layers, real-time meteorological data, and modeled wind data and predicted energy production throughout the Virginia offshore space. Also included are visual simulations, a PowerPoint presentation, and printed materials, all of which would be useful to support a future public education campaign for offshore wind. This second volume is intended to stand alone as it is not specific to the three sites developed in the first volume, and it provides resources that will be critical to the ongoing development of offshore wind in Virginia state and federal waters.

Virginia Offshore Wind Website

The Virginia Offshore Wind website, which went live in August 2012, is designed for sharing geospatial data. This website and the various online tools and resources it supports will serve

as the primary repository and portal for/to the broad base of online resources that pertain to offshore wind and development in Virginia. Available data will provide the opportunity to take a closer look at actual wind behaviors and estimate actual energy production, with easy access links to real time hourly data for wind shear, air temperatures, air density, etc. The website also hosts the VOWDA website which is available to view at http://offshorewindVA.org. **Appendix G** provides a detailed description of what is available on the website, including illustrated user instructions.

Gamesa and Poseidon Projects

On March 27, 2012, Governor McDonnell announced that the Virginia Marine Resources Commission voted unanimously to approve proposed construction of a 479-foot-tall, five-megawatt wind turbine generator prototype in the lower Chesapeake Bay, three miles off the Eastern Shore town of Cape Charles.

The proposal, supported by $1 million of funding by DMME with support through the American Recovery and Reinvestment Act of 2009, was submitted by Gamesa Energy USA, which partnered with Huntington Ingalls Newport News Shipbuilding, to develop and test new offshore wind technologies that will reduce the cost of wind power. The purpose of the project was to advance the demonstration of Gamesa Energy USA, LLC's new offshore WTG technology, the G11X, specifically designed for deployment in offshore wind environments worldwide.

The Virginia Marine Resources Commission approved the project, which included the installation of a steel monopile foundation and tower with a maximum blade tip height of 479 feet above mean sea level, stone riprap scour protection around the foundation base, and the installation of 15,219 linear feet of submerged power cable buried a minimum of six feet below the seabed. However, Gamesa, citing uncertainties in the North American offshore wind energy market, elected not to go forward with the project in the United States at this time.

A second federal grant from DMME for $750,000 was awarded to Alexandria-based Poseidon Atlantic to develop pre-construction phases of a U.S. wind turbine test and certification facility on Virginia's Eastern Shore. Poseidon's European partner company Ecofys successfully developed a similar facility in the Netherlands. The grant funding was expended by April 30, 2012, and Poseidon continues to invest its private funds in the project.

Presentations Made to VOWDA

AWS Truepower LLC – October 5, 2011: AWS's perspective on the value of using the Chesapeake Light Tower for Virginia's offshore wind development program. Presentation

addressed the technical data needs for offshore wind project planning, conventional and alternative approaches, and potential roles of the Chesapeake Light Tower.

Chesapeake Light Tower Federal Agency Working Group – October 5, 2011: Briefing on DOE's inter-agency working group that was formed to address offshore energy resource assessment and design conditions, and that identified the need for data and an offshore facility to collect this data. DOE and other stakeholders were going to explore opportunities for sharing the costs for the preservation and use of the CLT as a research and data collection facility.

MET Tower Report Update – October 5, 2011: VCERC review of updates to the December 2010 Meteorological Tower Placement Report -- benefits to upgrading the Chesapeake Tower and the Virginia WEA Resource Assessment and recommendation for a phased development approach for the metocean data collection program.

Overview of Offshore Wind Development Key Efforts by Public and Private Organizations and Recent and Ongoing JMU Efforts – December 8, 2011: VCERC and JMU overview of public and private offshore wind development efforts in Virginia. The presentation focused on the public sector and the value of three selected test site locations in the City of Suffolk, Hampton Roads, and Newport News as well as JMU pre-permitting and regulatory activities associated with the three test sites.

Hampton Roads Sanitation District Meeting Update – January 10, 2012: VCERC overview of the December 22 meeting with the Hampton Roads Sanitation District Quality Steering Team to discuss developing a wind turbine site in the vicinity of the Nansemond Wastewater Treatment Plant.

BOEM Presentation on Virginia Research Lease Application, Call and Next Steps – February 15, 2012: BOEM overview on the status and next steps for BOEM wind leasing on the OCS offshore Virginia.

Dominion Report on Transmission Solutions Study – February 15, 2012: Status of Dominion's progress on its offshore wind interconnection study examining the development of and best route for a transmission trunk line to connect any offshore wind projects that could lower developer project costs.

Interim Report on Offshore Wind Advanced Technology Demonstration Site Development – February 15 , 2012: JMU status updates on web development and data management; geosciences desktop study; interconnection, permitting preparation, and regulatory overview; meteorological overview and WRAMS modeling; analysis of historical data sets,

micro-meteorological wind modeling, and tower deployment; and outreach and engagement.

Poseidon-Atlantic Project Overview – April 19, 2012: Overview of the Poseidon Atlantic Wind Test Laboratory project along Virginia's Eastern Shore in Northampton County, a project that could be the first facility to test and certify offshore and land-based wind turbine generators in the United States.

Fugro Atlantic – Supply Chain Development in Europe – April 19, 2012: Overview of European offshore wind supply chain development, using Belgium's Thornton Bank wind power farm as the example.

Offshore Wind Advanced Technology Demonstration Site Development Draft Report -- June 26, 2012: JMU overview of the draft report – project pre-development, and offshore wind development tools and resources.

Initial Modeling—Impacts of Offshore Wind Transmission – September 13, 2012: PJM Interconnection presentation on its offshore wind integration studies. PJM presented an overview of their 2012 RTEP Analysis and the results from their Offshore Wind Integration Study. This study included initial modeling and analyses focused on validating the ability of production cost simulation tools to model a system similar to the Atlantic Wind Connection (AWC) project and offshore wind resources interconnected via high voltage direct current (HVDC). **Appendix H** provides a summary of the study results.

IV. Federal Offshore Wind Developments and Actions Affecting Virginia

Bureau of Ocean Energy Management (BOEM) Activities in 2012

- A Notice of Proposed Grant and Request for Competitive Interest (RFCI) was published December 2011 for the area proposed by the Atlantic Wind Connection right-of-way. The comment period ended February 21, 2012, and 58 comments were received. Comments will be considered in the NEPA analysis and included in the upcoming scoping. DMME and VOWDA comments in response to this RFCI have been described in the previous section.

- The Virginia Call for Information and Nominations was published in the Federal Register on February 3, 2012. A total of eight commercial nominations were received, as tabulated earlier in Section III and detailed in Appendix B.

- On May 14, 2012, following the 60-day open comment period and request for competitive interest, BOEM announced a finding of no competitive interest for the proposed Mid-Atlantic offshore wind energy transmission line, known as the Atlantic Wind Connection. This cleared the way for the project to move forward with the environmental review necessary to grant Atlantic Grid Holdings, LLC, a right-of-way for the proposal to build a "backbone" transmission line. By linking wind farms 15 to 20 miles off the coast, the backbone would reduce the number of individual radial lines needed to bring the energy to shore. On May 15, 2012, BOEM published a notice in the *Federal Register* that no competitive interest exists for the area requested in Atlantic Wind Connection's application for a right-of-way (ROW) grant to build an offshore electrical transmission system on the Outer Continental Shelf off the coasts of New York, New Jersey, Delaware, Maryland, and Virginia. (77 FR 28620).

- On May 21, 2012, BOEM issued a Finding of No Historic Properties Affected for the Issuance of Commercial Leases within the Virginia WEA. BOEM issued similar findings for the other three "Smart from the Start States" as follows: Maryland on June 25, Delaware on April 26, and New Jersey on July 11. The scope of these findings is limited to Lease Issuance, and all indicate that "through lease stipulations, BOEM will require the lessee to avoid, during geotechnical (sub-bottom) sampling activities, any potential historic properties identified through high-resolution geophysical surveys."

- BOEM convened its fourth in-person Virginia Renewable Energy Task Force meeting on Tuesday, June 5, 2012, in Norfolk to discuss the responses to the Call and next steps, including Proposed Sale Notice.

- On June 1, 2012, the Virginia Department of Mines, Minerals and Energy (DMME) submitted an unsolicited nomination for a research lease under 30 CFR 585.238 for the siting of two meteorological ocean and environmental monitoring platforms. The nomination is currently under review.

- On July 23, 2012, DMME submitted its second unsolicited draft application for a research lease under 30 CFR 585.238, proposed primarily for turbine testing. The draft application is also currently under review.

- September 2012, BOEM and DMME entered into a partnership agreement to collect geologic and geophysical information for the Virginia WEA to lessen risk and lower costs for developers, and accelerate the development offshore.

Department of Energy (DOE) Activities in 2012

- In January 2012, DOE finalized a grant (originally awarded in September 2011) to Virginia partners, Dominion, VCERC, Alstom, Moffat Nichol and NREL, designed to help lower the levelized cost of energy through innovation in wind turbine design, foundation and substructure design, offshore transport and installation, and offshore electrical infrastructure.

- In April 2012, GL Garrad Hassan was awarded grants in the amount of $500,000 and $200,000 by the U.S. Department of Energy to identify optimal strategies for the installation, operation, and maintenance of offshore wind farms and to assess the readiness of U.S. ports to meet the needs of the industry.

Expiration of Federal Tax Credits' Impact on U.S Wind Industry

In 1992, Congress enacted a federal renewable electricity production tax credit (PTC) which is a per kilowatt-hour tax credit for electricity generated by qualified energy sources, one of which is wind. As originally enacted, the PTC was set to expire in 1999. The PTC has been renewed and expanded many times. Its most significant expansion was in 2008 and it was most recently updated in February 2009 with an expiration date of December 31, 2012.

In 2005, Congress enacted a robust package of corporate energy investment tax credits (ITC) focused primarily on renewable energy sources and conservation. These incentives were expanded by 2008 legislation and most recently updated in February 2009 with an expiration date of December 31, 2016.

Vestas and General Electric (GE), two of the world's largest wind turbine manufacturers, predict a major decline in wind power installations and investments if federal production tax credits are allowed to expire at the end of the year.

Vestas warned that U.S. demand is likely to shrink by up to 95 percent in 2013 if the production tax credit for wind generation is not extended. They recently announced plans to consolidate three U.S. research and development offices to a hub in Brighton, Colorado, where it has two manufacturing plants. Vestas says uncertainty about whether Congress will extend a wind production tax credit has weakened demand for the turbines it makes.

GE, which was the largest supplier in the U.S., also said it expected its wind business to shrink next year. Sources: Financial Times, The Greeley (Colorado) Tribune, The Boston Globe)

Chambers for Innovation and Clean Energy, the only national, non-partisan clean energy network and information hub for local chambers of commerce, recently issued a letter calling

on Congress to extend the production tax credit for wind energy. With 240 local chambers from 47 states participating in its network, Chambers for Innovation and Clean Energy emphasized in its letter that allowing the PTC to expire will hurt local economies, send jobs and capital elsewhere, and risk ceding America's clean energy leadership to our global competitors. Their letter is available at: http://is.gd/Chambers4PTC.

In April 2012, the National Governors Association wrote a letter to congressional leaders in support of extending several key renewable energy incentives, including the production tax credit (PTC) and the investment tax credit (ITC) for wind power. They also encouraged the implementation of an ITC for the first 3 GW of offshore wind energy put into service.

V. Summary of 2012 Key Offshore Wind Developments in Other Atlantic States

Delaware

- A comprehensive study of human activity and ecosystems in mid-Atlantic waters off the coast of Delaware by the University of Delaware's Center for Carbon-Free Power Integration (CCPI) helps establish a basis for more informed planning and decision-making regarding the development of offshore wind and other marine renewable energy projects. [March 2012]
- On April 26, 2012, BOEM made a Finding of No Historic Properties Affected for the Issuance of Commercial Leases within the Delaware Wind Energy Area.
- An inchoate lease in the Delaware WEA is still held by NGR even though Deepwater Wind has pulled out of the offshore wind business.

Florida

- Under the 2007 BOEM Interim Policy for authorization of the installation of offshore data collection and technology testing facilities on the Outer Continental Shelf (OCS), BOEM identified four proposed lease areas (PLAs) offshore Florida. One applicant, Florida Atlantic University Southeast National Marine Renewable Energy Center, submitted an Interim Policy lease application for technology testing and resource assessment within three OCS blocks in PLA 1.
- On April 25, 2012, BOEM published the Federal Register Notice of Availability of an Environmental Assessment (EA) of the Marine Hydrokinetic Technology Testing on the

Outer Continental Shelf Offshore Florida. The EA considers the reasonably foreseeable environmental impacts and socioeconomic effects of issuing a lease offshore Florida and would authorize technology testing activities, including the installation, operation, relocation, and decommissioning of technology testing facilities. Comments received were posted to the BOEM website.

- On May 9, 2012, BOEM held a public information meeting in Fort Lauderdale, Florida.

Maine

- BOEM received an unsolicited request in October 2011 for a commercial lease from Statoil North America Inc. (Statoil NA). In November 2011 BOEM finished a completeness review of the unsolicited lease application and deemed Statoil NA to be legally, technically and financially qualified to hold a commercial lease on the OCS. A second Maine task force meeting was held on December 8, 2011, to discuss the unsolicited lease application.

- A third BOEM Maine Task Force meeting (via teleconference and webinar) was held on May 23, 2012, to discuss the Request for Competitive Interest Notice for the unsolicited lease request received by BOEM for the proposed “Hywind” project.

- The Potential Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Maine Request for Interest was published in the Federal Register on August 10, 2012.

- The Notice of Intent to Prepare an Environmental Impact Statement for Potential Commercial Wind Lease Issuance and Approval of Construction and Operations Plan Offshore Maine was published in the Federal Register on August 10, 2012.

- BOEM will convene two information sessions in Maine on October 23 and 24, 2012. The goal of these meetings is to explain the next steps in BOEM’s leasing and environmental processes regarding StatOil North America’s request for commercial wind energy lease offshore Maine. These meetings will also provide opportunities for the public to provide comments and ask questions.
- Maine Public Utility Commission rejected Statoil’s proposed term sheet for utilities to buy power from the wind farm. The Commission cited the project as being too risky, but said they were willing to reconsider the contract if Statoil improved its offer.

Maryland

- The Maryland Call for Information and Nominations was published in the Federal Register on February 2, 2012. Six nominations of interest were received.
- On June 25, 2012, BOEM made a Finding of No Historic Properties Affected for the Issuance of Commercial Leases within the Maryland Wind Energy Area.
- In February 2012, the Maryland Public Service Commission directed Exelon to invest $32 million for offshore wind development. Two million dollars is allocated for a public institution or university's research in wind energy applications and $30 million is dedicated to construction and operation planning in order to realize an offshore wind project.

Massachusetts

- The Massachusetts utility NStar agreed to buy power from the proposed Cape Wind offshore wind farm for more than double what electricity from conventional sources is projected to cost during the 15-year term of the deal. The contract filed with state regulators totals about $1.6 billion, assuming the project obtains hoped-for tax credits. According to estimates in the contract, that's $940 million above the market price of conventional electricity during that period. [March 2012]
- In April 2012, Cape Wind selected the joint venture team of Flatiron Construction Corp., Cal Dive International, Inc., and Cashman Equipment Corp. as its construction contractor to build America's first offshore wind farm in Nantucket Sound.
- BOEM announced the area identification under the Smart from the Start initiative toward responsible siting, leasing and construction of new projects by defining a Wind Energy Area (WEA) for off the coast of Massachusetts on May 30, 2012.
- Ten developers are interested in building wind farms off the coast of Massachusetts that together could generate nearly 10 times the amount of energy as the Cape Wind project. The wind farms would be built in an area of federal waters larger than Rhode Island, about 14 miles south of Martha's Vineyard and identified by BOEM for such development. After more than two years of talks with local and state officials, environmentalists, fishermen, and tribal leaders, BOEM refined the boundaries of the wind energy area, down to 1,160 square miles from an initially proposed 3,000. [June 2012]

- BOEM convened a joint Rhode Island and Massachusetts meeting, on August 8, 2012, in Narragansett, Rhode Island, to present and discuss the next steps in the commercial wind leasing process offshore Rhode Island and Massachusetts.

New Jersey

- On July 11, 2012, BOEM made a Finding of No Historic Properties Affected for the Issuance of Commercial Leases within the New Jersey Wind Energy Area.

- On August 29, 2012, the New Jersey Board of Public Utilities posted a notice on its website announcing that it will delay at least until the end of the year acting on the first application to come before the agency seeking approval to build a wind farm off of Atlantic City. Fishermen's Energy plans to build a 25-30MW demonstration wind farm some 4.5m off Atlantic City, but consultants working for state authorities have challenged whether the project makes economic sense for consumers.

- The NJ BPU is presently taking comments on its proposed OREC rules for offshore wind. The comment period closes on October 20, 2012.

New York

- A new study mapping out habitats in and around the waters off New York was released in March 2012, bringing the state a step closer to determining the potential for wind energy projects offshore. The study is the product of a two-year joint effort by New York's Department of State and the National Oceanic and Atmospheric Administration to identify critical bird and fish habitats to ensure that they are not harmed by future wind farms. Environmental groups say the prescreening will help save time and red tape and could attract developers and investors to wind projects by removing uncertainties about the environmental impacts at a given site.

- The second BOEM-NY Renewable Energy Task Force meeting was held on April 3, 2012. This meeting focused on an update regarding New York's Coastal Management Program's offshore wind energy planning and siting activities, and for the first time Task Force members discussed the New York Power Authority's request for a commercial lease offshore Long Island.

North Carolina

- The fourth BOEM North Carolina Renewable Energy Task Force Meeting was held on August 2, 2012.

Rhode Island

- BOEM announced the area identification under the Smart from the Start initiative for siting, leasing and construction of new projects by defining a Wind Energy Area (WEA) for off the coast of Rhode Island and Massachusetts on February 24, 2012.
- On March 1, 2012, BOEM convened a meeting of the BOEM Rhode Island Renewable Energy Task Force via teleconference to present and discuss the draft Request for Competitive Interest (RFCI) for the Deepwater Wind Block Island Transmission System Proposed Right-of-Way Grant.
- BOEM announced the availability of an environmental assessment that analyzes potential environmental effects associated with renewable energy leasing and data gathering in the WEA off the coast of Rhode Island and Massachusetts on July 2, 2012.
- BOEM convened information sessions on July 16-17, 2012, in Rhode Island and Massachusetts to provide additional opportunities for public input on the Environmental Assessment and to explain the commercial leasing process.
- BOEM convened a joint Rhode Island and Massachusetts meeting on August 8, 2012, in Narragansett, Rhode Island, to present and discuss the next steps in the commercial wind leasing process offshore Rhode Island and Massachusetts.
- In September 2012, Deepwater Wind submitted its required permits to the RI Coastal Resources Management Council, the lead RI permitting agency, and the Army Corps of Engineers, the lead federal permitting agency to construct five wind turbines off the coast of Block Island, RI. The $300 million project is expected to be in operation in the fall of 2014.

South Carolina

- BOEM established a South Carolina Renewable Energy Task Force to facilitate intergovernmental communications regarding OCS renewable energy activities. The first in-person Task Force meeting was held March 29, 2012.

VI. Recommendations

Virginia has continued its thoughtful approach to preparing for offshore wind development and cultivating the industry to support offshore wind. Two years ago, we emphasized specific actions, including: establishing a voluntary RPS (allowing for out-of-state purchases), investing in manufacturing grants to support the supply chain community, and requiring the State Corporation Commission (SCC) to consider the economic development impact of projects in determining their cost effectiveness. In the last year, we have added: completion of research that establishes the permitting process, stakeholder involvement, and necessary impact analysis for development of sites offshore; investment in geologic surveys in the Wind Energy Area; working strategically with BOEM to resolve conflicts with DOD and commercial interests in the coastal area adjacent to the Wind Energy Area; working with BOEM to accomplish issuance of the Call and completion of the draft Proposed Sale Notice; and supporting industry efforts to reduce the levelized cost of development of offshore wind off of Virginia's coast. These efforts have presented an environment for private development off the coast of Virginia provided the cost of offshore wind can be shown to be competitive with alternate sources of energy.

With the establishment of VCERC and VOWDA, Virginia has established a framework within which research and development and policy and stakeholder collaboration to support offshore wind development will be accomplished efficiently. The Commonwealth's efforts and application of public resources are intended to facilitate private development of offshore wind energy. The goals and objectives of state directed data acquisition efforts, such as the ocean survey and research leases, are shaped by the private sector stakeholders who ultimately will make much larger private investments and make efforts to provide reasonably priced energy and develop an offshore wind industry, supply chain, and job creation for Virginians. Activities to take place in the research lease areas, such as installation of data towers, along the edges of Virginia's commercial lease area, could substantially reduce uncertainties in energy production estimates through earlier and more accurate wind measurements and environmental data gathering. These activities will enable our offshore wind resources, and the jobs associated with the offshore wind industry, to develop more quickly. In order to successfully continue with this approach, VOWDA recommends as their top three priorities that Virginia consider 1) providing additional state funding to match private investments in activities like the pre-construction and construction phases of met tower installation, 2) establishing a low-interest revolving loan fund to assist and encourage private efforts to collect additional met-ocean and environmental data, and protect access to the Port of Virginia for offshore wind developers and supply chain. Specifically, VOWDA makes the following recommendations:

RECOMMENDATION 1: **Support industry request to provide state funding to match private and other investments in the design, permitting, and installation of buoys, structures, and equipment that will facilitate the collection of met-ocean data / or pre-construction development costs and construction of met towers.**

RECOMMENDATION 2: **Establish a low-interest revolving loan fund to provide funding for private investment in the collection of additional met-ocean and environmental data to support lowering the cost of development of an offshore wind project in Virginia's Wind Energy Area.**

RECOMMENDATION 3: **That any agreement for port privatization preserve no- or low-cost access to port land and facilities to maintain Virginia's competitive advantage to attract and develop an offshore wind energy industry and supply chain .**

ADDITIONAL RECOMMENDATIONS:

1. Support the extension of the federal Investment Tax Credits and Production Tax Credits.
2. Continue to support BOEM in its efforts to release the proposed sale notice off the coast of Virginia and conduct an auction of the lease blocks in Virginia's WEA as expeditiously as possible.
3. Support efforts for successful completion of an advanced technology demonstration project. Work with federal and state agencies to ensure efficient permitting of demonstration projects.

VII. Future Goals/Activities

VOWDA's top priority moving forward will be to engage with BOEM, VOW and others through the Intergovernmental Task Force and directly monitor, support, expedite and provide input to key next steps in the Virginia Offshore Wind commercial development process, including the following milestones and activities:

- BOEM's Proposed Sale Notice for the Virginia WEA
- BOEM's Leasing of the Virginia WEA

- Award and implementation of DMME Research Lease Application 1
- Award and implementation of DMME Research Lease Application 2
- DOE's possible federal award for demonstration of advanced offshore wind technology to Virginia recipients
- DMME/BOEM ocean survey
- Final analysis from WeatherFlow of 12 months of modeling
- Identification of specific Port and private assets and facilities attractive and unique to Virginia to support private developers and supply chain members involved in pre-construction, construction, operation and maintenance.
- Continue to carefully monitor and engage with PJM's ongoing RTEP process as they explore the costs of offshore wind transmission – especially as issues of cost allocation for offshore transmission are considered.

VOWDA will also continue to support development of the Virginia Wind Energy Area and the cultivation of industry to support offshore wind through the following efforts:

- Supporting the BOEM and DMME partnership projects to collect geologic and geophysical information for the Virginia Wind Energy Area.
- Maintaining and updating the clearinghouse of 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.
- Working with the Virginia Department of Environmental Quality and other stakeholders on a process for marine spatial planning to assist in the resolution of use conflicts for the Virginia WEA and EEZ.
- Supporting VCERC, the Virginia Department of Economic Development, the Secretary of the Commonwealth and the Virginia Offshore Wind Coalition to assess the sourcing and supply strategy for components, services, vessels, employed or being contemplated for other offshore wind farms in the US and overseas and identifying how Virginia companies and resources can best be deployed to promote offshore wind development in Virginia. Using the information to develop a supply chain registry for offshore wind supplies to be added to the VOWDA website.

- Engaging with stakeholders to consider and discuss the results of VOWDA's Stakeholder Survey and develop specific recommendations to support the three key policy and economic drivers identified through the survey: (i) Policy Mandates and Regulatory Framework to Enable Offshore Wind, (ii) Capital and Operating Cost Reduction to Reduce the Delivered Cost of Electricity, and (iii) Reduced Schedule and Cost to Develop, Permit, and Design Offshore Wind. Assess whether an additional survey of developers interested in developing the Virginia WEA is needed.

- Examining existing processes and procedures and identifying opportunities to streamline the state permitting processes required for offshore wind development.

- Providing technical support to the Virginia Economic Development Partnership and identifying state 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 development of a strategic or ocean management plan for Virginia waters, that 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 available grants and other financing mechanisms to support offshore wind development and support, endorsing and possibly participating in federal grant applications and state efforts that support projects that improve the offshore wind value chain, reduce the delivered cost of power, and create job opportunities.

- Continuing to advocate on behalf of the Commonwealth that Virginia has the infrastructure, supply chain, resources, location, and can-do spirit that will make Virginia an important host to and partner for offshore wind developers.

APPENDIX A

MISSION STATEMENT, OBJECTIVES, AND WORK PLAN

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 met-ocean 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 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>VA Offshore Industry Data:</u> Facilitate the definition, collection, dissemination of relevant met ocean data, environmental data, and other information needed by VA 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 VA.

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 VA 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>VA 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 VA 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 VA 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.

VOWDA Work Plan

❍ Not started
■ On Plan
✓ Complete
◆ Issues
◆ Behind Schedule

Date of Report	Feb 15, 2012

Name	VOWDA Work Plan					Sponsor	VOWDA
Start Date	1/1/12		End Date	12/31/12		Team Lead	Art Moye

VOWDA Work Plan and timeline

Not Started ❍ | On Plan ■ | Complete ✓ | Issues ◆ | Behind Schedule ◆

Item No	Project	Start Date	End Date	% Complete	Status	Dependencies	Lead Responsible	Staff Assigned	Deliverable	Comments
	Administrative						**Art Moye**			
1.01	Establish a protocol for communicating with policymakers						Art Moye	Cathie France		working with Governor's Office
1.02	Prepare Annual Report					6.04	Art Moye	Cathie France		required by statute to be submitted in October each year and include policy recommendations
	Expedite Release of BOEM Call for Virginia	**1/1/12**	**ASAP**				**Art Moye, Joan Bondareff**	**Cathie France, Ken Jurman**	**Facilitate necessary data/discussions to get call out ASAP**	
2.01	Support development of a strategic or ocean management plan for VA waters, that includes uses such as offshore wind, and participate in the Coastal and Marine Sapatial Planning proces for federal waters off the coast of VA, as requested						Joan Bondareff, Bob Matthias	George Hagerman, Ken Jurman	may need to provide data, assistance during PARs being conducted by Coast Guard, as well as BOEMRE task force	
2.02	Monitor VA BOEM Task Force and provide feedback as necessary						Bob Matthias		liason will represent VOWDA to Task Force and bring back information to keep VOWDA Board informed	
	Engagement with other groups interested in Offshore Wind Development in VA	**1/1/12**	**12/31/12**				**Bob Matthias**	**Cathie France**	**Ensure Coordination/Collaboration with other groups/stakeholders to avoid duplicative efforts and**	
3.01	Monitor responses to the VA Call and proactively reach out to the responders to assess their needs, establish relationships, etc.	dependent on release of the Call					Brian Redmond, Ron Ritter	George Hagerman, Ken Jurman		
3.02	Establish a process to exchange information and coordinate efforts with VOW and other interested groups to support offshore wind and clarify respective roles and responsibilities	1/1/12					Bob Matthias, Brian Redmond, Mary Doswell, Ron Ritter	Cathie France	Strenghen knowledge base and advocacy strength through coordinated messaging and voice	
3.03	Coordinate meetings with the VA BOEMRE Task Force to discuss and understand emerging issues, stakeholder input, and decisions and processes that will affect the development of offshore wind in VA	1/1/12					Bob Matthias	Cathie France, Ken Jurman		
3.04	Coordinate meetings with VEDP to 1) exchange, review and discuss information regarding offshore wind development in VA focusing on economic benefits, job creation, manufacturing and services needed v. available in the state and 2) develop and support strategies to accelerate investment in VA targeted at the offshore wind industry	1/1/12					Art Moye, Ron Ritter	Cathie France	Provide support for building economic development opportunities that relate to offshore wind and supply chain to support it	Jerry Giles

VOWDA Work Plan

❍ Not started
■ On Plan
✓ Complete
◆ Issues
◆ Behind Schedule

Date of Report	Feb 15, 2012

Name	VOWDA Work Plan					Sponsor	VOWDA
Start Date	1/1/12		End Date	12/31/12		Team Lead	Art Moye

VOWDA Work Plan and timeline

Not Started ❍ | On Plan ■ | Complete ✓ | Issues ◆ | Behind Schedule ◆

Item No	Project	Start Date	End Date	% Complete	Status	Dependencies	Lead Responsible	Staff Assigned	Deliverable	Comments
3.05	Establish a process for communicating regularly with the Port Authority, the Chesapeake Bay Bridge Tunnel Commission, and the Virginia Department of Transportation	1/1/12					Art Moye	Cathie France		
	Data						**Brian Redmond**	**Al Christopher**		
4.01	Update the clearinghouse of accessible information of wind-related data and information, including delivered cost, rate impact, economic impact and environmental impacts of offshore wind compared to other sources of energy						Mary Doswell, Lisa Johnson	George Hagerman, Ken Jurman	assist Economic Development opportunities by having the information accurate and available	
4.02	Keep the state and federal regulatory framework for offshore wind leases and permits database updated						Bob Matthias, Mary Doswell, Art Moye	Cathie France	assist Economic Development efforts by providing a clear path to site a project	
4.03	Monitor progress on the restoration and maintenance of the Chesapeake Light Tower and make recommendations as to Virginia's involvement						Bob Matthias	George Hagerman, Ken Jurman		
4.04	Coordinate activities, financing, and uses of the DMME research lease						Joan Bondareff	George Hagerman, Al Christopher		
	Financial Grants/Incentives						**Lisa Johnson, Ron Ritter**	**Al Christopher**		
5.01	Identify available grants to support offshore wind development (state and federal)						Lisa Johnson, Ron Ritter	Al Christopher		
5.02	Identify other funding sources available to support offshore wind development (such as state/federal financing)						Lisa Johnson, Ron Ritter	Al Christopher		
5.03	Support/Endorse and possibly participate in federal grant applications and state efforts that support projects that improve the offshore wind value chain, reduce the delivered cost of power, and create job opportunities						Mary Doswell, Lisa Johnson, Ron Ritter, Brian Redmond	Cathie France		
5.05	Update the list of incentives and/or policy initiatives needed to attract offshore wind businesses to Virginia and include in the annual report						Lisa Johnson, Ron Ritter	Cathie France		Jerry Giles
	Regulatory Structure/Policy						**Mary Doswell, Joan Bondareff**	**Cathie France**		
6.01	Update the document summarizing key points relevant to permitting and regulatory framework for the offshore wind industry						Mary Doswell, Art Moye, Brian Redmond	Cathie France		
6.02	Keep links on the VOWDA website linking to appropriate sections of SCC, DMME and other relevant government sites describing regulation and					4.04, 6.01	Mary Doswell, Brian Redmond	Jon Miles, Ken Jurman		

VOWDA Work Plan

❍ Not started
■ On Plan
✓ Complete
◆ Issues
◆ Behind Schedule

Date of Report	Feb 15, 2012						
Name	VOWDA Work Plan					Sponsor	VOWDA
Start Date	1/1/12		End Date	12/31/12		Team Lead	Art Moye

VOWDA Work Plan and timeline

Not Started ❍ | On Plan ■ | Complete ✓ | Issues ◆ | Behind Schedule ◆

Item No	Project	Start Date	End Date	% Complete	Status	Dependencies	Lead Responsible	Staff Assigned	Deliverable	Comments
6.03	Develop a strategy or action plan to address barriers to offshore wind development in VA						Mary Doswell, Brian Redmond, Bob Matthias	Cathie France		
	Promotion of Virginia's unique attributes and readiness for offshore wind						**Lisa Johnson**			
7.01	Develop a VA offshore wind brochure for web or handout						Brian Redmond, Bob Matthias	Ken Jurman		VEDP offered to assist
7.02	Brainstorm ways to promote Virginia during the 2012 AWEA conference in Va Beach						Lisa Johnson, Mary Doswell, Art Moye	Cathie France		VEDP offered to assist

Risks/Issues List

Item No.	Risk/Issue Description	Date Reported	Reported By	Status	Priority	Owner	Resolution/Comments
1							
2							
3							
4							
5							

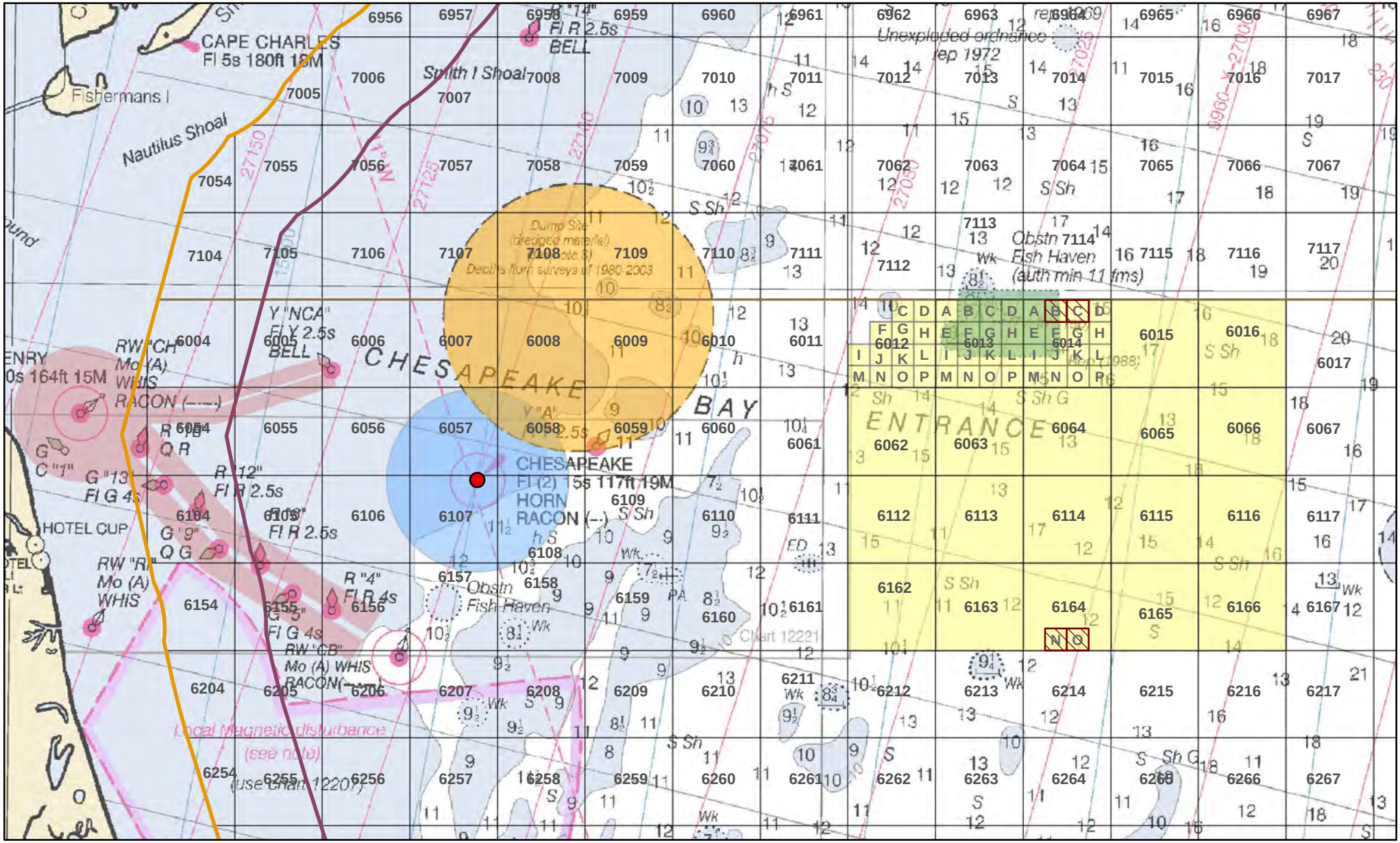
APPENDIX B

VIRGINIA CALL FOR INFORMATION AND NOMINATIONS

- **MAP OF VIRGINIA CALL AREA**

- **EXPRESSIONS OF COMMERCIAL INTEREST**

BOEM Virginia Call for Information and Nominations Area



- Fed/State Boundary
- 8g Line
- Chesapeake Light House
- Chesapeake Lt/Bcn 5km Zone
- Fish Haven
- Dredge Disposal Area
- Traffic Separation Scheme
- Proposed Research Sub-blocks
- Virginia Call Area
- OCS Lease Blocks
- Official Protraction Diagram

0 2 4 6 8 10 12 Nautical Miles

0 5 10 15 20 Kilometers

Map ID: PACB-2011-1098

Bureau of Ocean Energy Management

Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) Offshore Virginia– Call for Information and Nominations [Docket No. BOEM-2011-0093].

In response to Bureau of Ocean Energy Management (BOEM) *Commercial Leasing for Wind Power Development on the Outer Continental Shelf (OCS) Offshore Virginia—Call for Information and Nomination* [Docket No. BOEM–2011-0093], published February 3, 2012, BOEM **received eight nominations of interest** wishing to obtain a commercial lease for a wind energy project. The parties and the OCS blocks nominated for development are provided below. BOEM has initiated a review of these parties' submissions to assess filing completeness; evaluate legal, technical, and financial qualifications to hold an OCS renewable energy commercial lease; and, determine competitive interest.

Apex Virginia Offshore Wind, LLC

Protraction Number	Protraction Name	Block Number	Sub-Block
NJ18-11	CURRITUCK SOUND	6012	C,D,F,G,H,I,J,K,L,M,N,O,P
NJ18-11	CURRITUCK SOUND	6013	A,M,N,O,P
NJ18-11	CURRITUCK SOUND	6014	C*,D,G,H,K,L,M,N,O,P
NJ18-11	CURRITUCK SOUND	6015	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6016	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6062	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6063	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6064	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6065	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6066	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6112	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6113	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6114	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6115	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6116	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6162	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6163	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6164	A,B,C,D,E,F,G,H,I,J,K,L,M, N*,O*,P,
NJ18-11	CURRITUCK SOUND	6165	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6166	ENTIRE BLOCK

*Apex is aware that the Commonwealth of Virginia has expressed an interest in these blocks to site a meteorological tower. Apex believes these research activities would be compatible with our planned commercial wind energy development and operation activities

Arcadia Offshore Virginia, LLC

Protraction Number	Protraction Name	Block Number	Sub-Block
NJ18-11	CURRITUCK SOUND	6012	C,D,F,G,H,I,J,K,L,M,N,O,P
NJ18-11	CURRITUCK SOUND	6013	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6014	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6015	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6016	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6062	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6063	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6064	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6065	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6066	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6112	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6113	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6114	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6115	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6116	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6162	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6163	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6164	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6165	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6166	ENTIRE BLOCK

Cirrus Wind Energy, Inc.

Protraction Number	Protraction Name	Block Number	Sub-Block
NJ18-11	CURRITUCK SOUND	6062	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6112	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6162	ENTIRE BLOCK

Dominion Resources, Inc.

Protraction Number	Protraction Name	Block Number	Sub-Block
NJ18-11	CURRITUCK SOUND	6012	C,D,F,G,H,I,J,K,L,M,N,O,P
NJ18-11	CURRITUCK SOUND	6013	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6014	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6015	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6016	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6062	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6063	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6064	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6065	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6066	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6112	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6113	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6114	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6115	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6116	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6162	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6163	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6164	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6165	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6166	ENTIRE BLOCK

enXco Development Corporation

Protraction Number	Protraction Name	Block Number	Sub-Block
NJ18-11	CURRITUCK SOUND	6012	C,D,F,G,H,I,J,K,L,M,N,O,P
NJ18-11	CURRITUCK SOUND	6013	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6014	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6015	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6016	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6062	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6063	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6064	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6065	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6066	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6112	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6113	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6114	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6115	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6116	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6162	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6163	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6164	All except N&O
NJ18-11	CURRITUCK SOUND	6165	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6166	ENTIRE BLOCK

Fisherman's Energy, LLC.

Protraction Number	Protraction Name	Block Number	Sub-Block
NJ18-11	CURRITUCK SOUND	6012	C,D,F,G,H,I,J,K,L,M,N,O,P
NJ18-11	CURRITUCK SOUND	6013	A,E,I,M,N,O,P
NJ18-11	CURRITUCK SOUND	6014	D,G,H,K,L,M,N,O,P
NJ18-11	CURRITUCK SOUND	6015	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6016	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6062	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6063	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6064	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6065	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6066	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6112	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6113	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6114	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6115	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6116	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6162	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6163	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6164	A,B,C,D,E,F,G,H,I,J,K, L,M,P
NJ18-11	CURRITUCK SOUND	6165	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6166	ENTIRE BLOCK

Iberdrola Renewables Inc.

Protraction Number	Protraction Name	Block Number	Sub-Block
NJ18-11	CURRITUCK SOUND	6012	C,D,F,G,H,I,J,K,L,M,N,O,P
NJ18-11	CURRITUCK SOUND	6013	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6014	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6015	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6016	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6062	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6063	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6064	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6065	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6066	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6112	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6113	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6114	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6115	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6116	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6162	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6163	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6164	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6165	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6166	ENTIRE BLOCK

Orisol Energy US, Inc.

Protraction Number	Protraction Name	Block Number	Sub-Block
NJ18-11	CURRITUCK SOUND	6015	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6016	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6062	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6063	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6064	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6065	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6066	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6112	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6113	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6114	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6115	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6116	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6162	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6163	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6164	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6165	ENTIRE BLOCK
NJ18-11	CURRITUCK SOUND	6166	ENTIRE BLOCK

APPENDIX C

DMME APPLICATION FOR RESEARCH LEASE NUMBER 1
(As Submitted 6/1/12)

DMME DRAFT APPLICATION FOR RESEARCH LEASE NUMBER 2
(As Submitted 7/23/12)

Unsolicited Application for a Section 238 Research Lease
by the Virginia Department of Mines, Minerals and Energy

Research Lease Number 1 for Met Towers in the Virginia Call Area

This final unsolicited lease application is submitted by the Department of Mines, Minerals and Energy (DMME), a state government agency of the Commonwealth of Virginia, to the Bureau of Ocean Energy Management (BOEM) of the United States Department of Interior, for a research lease in Federal waters off Virginia, as allowed by 30 CFR, Part 285, Section 238. The information provided below conforms to the general requirements for unsolicited lease applications as specified by 30 CFR, Part 285, Section 230, with the exception that there is no acquisition fee for a *research* lease, as indicated by 30 CFR, Part 285, Section 238, paragraph (g).

The main change to this application, as compared with the revised application dated 06 September 2011, is that the "Area Requested for Lease" section is changed to withdraw all nine sub-blocks identified for Turbine Testing, and to delete all associated text. DMME will submit a new unsolicited application for a second research lease dedicated to Turbine Testing, which will be entirely separate from this application.

(a) Area Requested for Lease

The DMME is requesting a Section 238 research lease for four (4) sub-blocks mapped in Figure 1 and listed in Table 1. These four sub-blocks will be used for siting two new Met Towers.

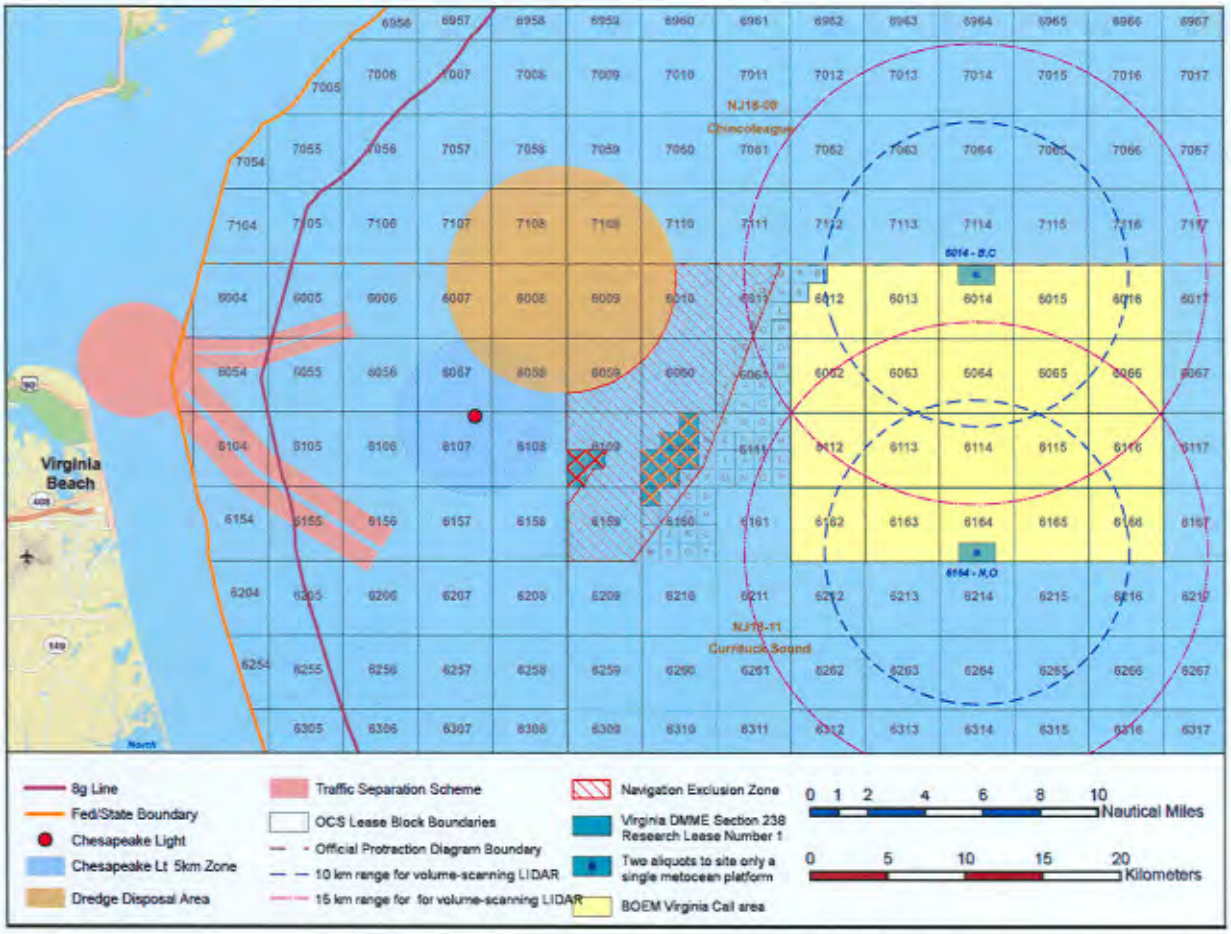


Figure 1. Map showing four sub-blocks in this research lease application. Red and orange "X" symbols indicate Turbine Testing sub-blocks withdrawn from the DRAFT and REVISED applications, respectively.

Table 1. List of Sub-Blocks Constituting Virginia's Proposed Research Lease Number 1

Protraction Diagram Name	Protraction Diagram Number	Research Purpose	Block Number	Sub-Block Letter
Currituck Sound	NJ18-11	Met Tower	6014	B,C
Currituck Sound	NJ18-11	Met Tower	6164	N,O

(b) General Description of Objectives and Facilities

This Section 238 research lease application proposes four sub-blocks to be leased for the siting of two metocean and environmental monitoring platforms for pre-and post-construction monitoring of wind velocities, water levels, waves, and bird & bat activities within and around Virginia's commercial offshore wind development area, which was published in the BOEM Call for Information and Nominations ("Call") on 21 February 2012.

One met tower could be located within the two sub-blocks located at the midpoint of the northern edge of Virginia's RFI area (6014-B, 6014-C). A second met tower could be located within the two sub-blocks located at the midpoint of the southern edge of Virginia's Call area (6164-N, 6164-O).

The two met towers will be identical in design and construction, enabling economies of serial fabrication and offshore equipment mobilization and demobilization for their installation. The two towers also will have identical instrumentation payloads, enabling quantity discounts in ordering of equipment.

Data acquisition and analysis from these platforms will:

(1) Measure wind direction at ten heights above sea level: 30 m, 45 m, 60 m, 75 m, 90 m, 105 m, 120 m, 135 m, 150 m, and 165 m, using a pulsed, vertical-profiling LIDAR (e.g. Leosphere WindCube or SgurrEnergy Galion), to characterize the wind shear across the span of a wind turbine rotor 120 m in diameter, located at a hub height of 90 to 105 m above sea level. A selected LIDAR unit would be tested against tall mast measurements by calibrated cup anemometers prior to installation on these two platforms.

Having high-resolution velocity profile measurements at these two locations would provide high-quality validation points for numerical wind models, which are needed to hindcast extreme events that turbines and towers must be designed to survive; hindcast operational winds for blade and drive train design against fatigue and turbulent loading; and forecast operational winds for offshore installation or major repair & replacement operations; as well as forecasting winds for output predictions needed by utility dispatchers for load balancing and scheduling project output in the PJM wholesale market.

(2) Map wind speed and direction at different elevations across the Call area, using volume-scanning LIDAR (e.g. the Lockheed-Martin WindTracer). These are anticipated to have a horizontal resolution of 100 m, a vertical resolution of 20 m, and a measurement range radius of 10 to 15 km (see Figure 1). Because Virginia's commercial Call area has a north-south width of 19.2 km, two data platforms are needed -- one at the mid-point of the northern edge, and one at the mid-point of the southern edge -- in order to fully map the Call area. Having a year's worth of measured wind velocity maps covering the entire Call area will provide timely data to inform commercial project site selection, estimates of annual energy production, and post-construction long-term monitoring of cumulative wake effects on the natural wind field as projects are commissioned.

(3) Measure still-water levels (e.g. with waves removed) and waves at the two platforms, using water level and wave probe based on capacitance (*e.g.*, RGR, Ltd. WG-50) or ultrasonic ranging (*e.g.*, General Acoustics e.K. LOG_aLevel), to provide data to validate hindcasting models of storm-generated extreme tides, storm surges, and waves, which in turn will be used as the basis for commercial project design. Over time, these will also provide pre- and post-construction measurements showing the cumulative effects of large wind projects, with hundreds of turbine substructures and foundations, on the natural wave field.

(4) Monitor bird and bat activity across the Call area, using marine avian radar system operating in both the X-band and S-band, to provide data on the pre- and post-construction flight behavior of resident pelagic birds and migrating shore birds and passerines.

(c) General Schedule of Proposed Activities

During the summer of 2012, it is anticipated that a geophysical and geotechnical characterization of the four sub-blocks will be available at reduced costs using a "vessel of opportunity" that will be transiting from the Gulf of Mexico to commercial project site surveys off the coasts of Delaware and New Jersey.

Two metocean data platforms could be installed on the northern and southern boundaries of the Call area and begin collecting data by the summer of 2013, contingent upon BOEM acceptance of a General Activities Plan and assuming that such platforms conform to the scope of the final regional Mid-Atlantic Environmental Assessment published in January 2012. A one-year design & build timetable is based on the experience of the NaiKun offshore wind project in designing, permitting, and installing a similar data platform (LIDAR-only, no tall anemometer mast) within six months off the coast of British Columbia.

(d) Renewable Energy Resource and Environmental Conditions in Area of Interest

As mapped by the most recent numerical modeling of this area by the National Renewable Energy Laboratory, the mean wind speed in the four sub-blocks of this proposed Research Lease Number 1 ranges from 8.0 to 8.5 m/s at an elevation of 90 m. A metocean extreme event analysis is now underway, but pending those results, the event that has produced the highest measured wind speed at the Chesapeake Light Tower during the 26 year-period since measurements began there in 1984 is Hurricane Gloria, which passed offshore Virginia Beach on 26 September 1985, having a peak 10-minute average wind speed of 37.1 m/s (83 mph or 72 knots) at an elevation of 43.3 m (142 ft) above sea level, and a peak significant wave height of 6.2 m (20 ft). In 2003, Hurricane Isabel had a slightly lesser peak wind speed of 33.0 m/s (74 mph or 64 knots), but a slightly higher significant wave height of 6.34 m (21 ft).

Benthic habitat types, fish communities and other marine living resources have been mapped by The Nature Conservancy (TNC), as has commercial fishing effort based National Marine Fisheries Service (NMFS) vessel trip report data. Our proposed Section 238 lease does not coincide with any priority benthic habitat areas identified by TNC. Further, the NMFS data do not indicate that there would be major fisheries conflicts in this area. More study and stakeholder engagement, which are additional site characterization activities envisioned under this lease application, are needed to characterize the ecological resources in the local area encompassed within the proposed research lease.

(e) Conformance with State and Local Energy Planning Initiatives

A letter from the Governor of the Commonwealth of Virginia, Robert F. McDonnell, supporting this unsolicited application for DMME Research Lease Number 1 is again submitted with this final application as Appendix A. The Governor views this research lease as an imperative step toward accelerating the commercial development of offshore wind in Federal waters off Virginia and creating economic opportunities and jobs associated with commercial offshore wind development without unnecessary delay.

Data acquisition towers can be planned, designed, and installed more quickly in this proposed research lease than by a developer in a commercial lease, particularly since overlapping commercial interest areas in response to the BOEM Virginia Call will trigger a competitive lease auction. DMME's proposed activities on Research Lease Number 1would allow early acquisition of industry-needed wind resource data and metocean design data one to two years before such a tower could be installed by commercial developers who must first win the competitive auction and then execute a commercial lease before they can submit a Site Assessment Plan for an entire commercial lease. By comparison, DMME is prepared to submit its General Activities Plan for this much smaller research lease as soon as a determination of no competitive interest enables BOEM to award the lease and execute a Memorandum of Agreement with DMME for Virginia Research Lease Number 1.

BOEM rules place a priority on commercial development over research activities. The activities intended to be accomplished in this proposed research lease area, as described above in Section (b), will facilitate commercial development by reducing wind resource uncertainties and validating operational metocean forecast models required for planning commercial installation and servicing activities. All eight of the commercial developers who responded to the BOEM Virginia Call indicated that they did not object to DMME's proposed siting of met towers on the four sub-blocks named in this application.

This application also conforms to local energy assurance initiatives by the City of Virginia Beach, where having a source of power to the east, unconstrained by west-to-east bottlenecks in the transmission grid provides a more secure energy supply. This same energy reliability benefit also applies to regional Navy facilities, including four within the City limits of Virginia Beach. Moreover, Navy shore installations have been charged with an order from the Secretary of the Navy to obtain 50% of their electric power from new renewable energy sources by 2020.

Finally, the 2010 legislative session of the Virginia General Assembly passed a joint resolution that supports a goal of the development of 3,000 megawatts of offshore wind power by 2025.[1]

(f) Documentation of Lessee Qualifications

In response to states' comments on the draft rule, which qualified only the U.S. Department of Energy (DOE) to establish and manage renewable energy research areas on the Outer Continental Shelf, the then-named Minerals Management Service broadened this provision to apply to States and other Federal agencies in addition to DOE. Therefore, this application is being submitted by the Virginia Department of Mines, Minerals and Energy, as a state government agency of the Commonwealth of Virginia.

This section demonstrates that the Virginia DMME has the technical and financial capabilities to conduct the activities to be authorized by a Section 238 renewable energy research lease on the Outer Continental Shelf (OCS) according to the provisions of 30 CFR 285.106 and 285.107.

The DMME is one of 13 executive agencies under the Office of the Virginia Secretary of Commerce and Trade, a Cabinet-level office that oversees the economic, community and workforce development of the Commonwealth. The DMME serves a large and varied group of people, organizations and agencies throughout the Commonwealth. Through its six divisions, the agency regulates the mineral industry, provides mineral research and offers advice on wise use of energy and mineral resources. Its programs directly serve the citizens who live near mining operations, mining labor groups, other regulatory agencies, the educational community, the energy and mineral industries, and environmental, consumer and industry special-interest groups. The Department's mission is to enhance the development and conservation of energy and mineral resources in a safe and environmentally sound manner in order to support a more productive economy in Virginia.

[1] http://lis.virginia.gov/cgi-bin/legp604.exe?111+ful+HJ605ER

The Commonwealth already has successfully demonstrated its legal eligibility to hold a lease as defined in 30 CFR 285.112 and further explained in 30 CFR 285.106 and 107. Submitted as Appendix B of this application is a letter dated 14 Feb 2011, which states that BOEM recognizes DMME as legally qualified to acquire and hold a renewable energy lease or grant on the OCS, and indicates that DMME's legal qualification documents are contained in a file identified as AEAU Company Number 15014.

Technical Capability

The Virginia Offshore Wind Development Authority (VOWDA) and the DMME will be directly involved in management of activities to be undertaken on the proposed research lease. VOWDA was created as a body corporate and a political subdivision of the Commonwealth[2] for the purposes 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 associated supply chain vendors by collecting relevant metocean and environmental data, by identifying existing state and regulatory or administrative barriers to the development of the offshore wind energy industry, by 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 by ensuring that the development of such 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 following key personnel would be directly involved on the Commonwealth of Virginia's technical management team for this project, including six VOWDA Board members, one DMME employee, and one VCERC researcher. Their names, titles, and descriptions of relevant experience are given below, and their resumes are included in Appendix C of this application.

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

Arthur W. Moye Jr is Executive Vice President of the Virginia Maritime Association, which, with its almost 500 members, serves as the "Voice of the Port." Mr. Moye also serves as the Executive Vice President of the Hampton Roads Shipping Association, whose purpose is to negotiate and maintain the collective bargaining agreement with the International Longshoremen's Association (ILA). Prior to his current position, he has served as an Officer and Director for both organizations during his 30 years in the maritime industry employed with one of the Port's stevedoring companies. Mr. Moye is well positioned to facilitate meetings with commercial maritime interests during the preparation of our General Activities Plan, which will help ensure that the detailed siting of our proposed metocean data platforms do not create a hazard to commercial navigation.

Joan Bondareff
Of Counsel, Blank Rome LLP
VOWDA Board Vice Chair

Joan M. Bondareff has more than 30 years of experience successfully managing programs and personnel, including eight years of Congressional legislative experience, with oversight of Coast Guard and transportation programs. She has served as General Counsel of a non-profit organization, Chief Counsel of a federal agency, Senior Counsel to a House Committee, and Environment and Energy Team Leader of a major Washington, DC consulting firm. Ms. Bondareff drafted legislation on several environmental and maritime subjects, including the Oil Pollution Act of 1990, Coastal Zone Management Act

[2] http://lis.virginia.gov/cgi-bin/legp604.exe?000+cod+67-1201

Reauthorization Amendments of 1990, the National Maritime Heritage Act, the Antarctic Conservation Act, and the Abandoned Shipwreck Act. She also obtained a $6 million federal grant for a Mid-West regional port in 2010.

Mary Doswell
Senior Vice President, Alternative Energy Solutions Dominion Resources
VOWDA Board member

Dominion is one of the nation's largest producers and transporters of energy, with a portfolio of approximately 28,200 megawatts of generation, 11,000 miles of natural gas transmission, gathering and storage pipeline and 6,300 miles of electric transmission lines. Dominion operates the nation's largest natural gas storage system with 947 billion cubic feet of storage capacity and serves retail energy customers in 15 states.

Dominion has considerable experience with design, construction, and operation of marine energy projects, including a marine liquefied natural gas (LNG) terminal in the Chesapeake Bay, several hydroelectric power stations, and a variety of underwater power cables for transmission and distribution over a wide range of voltages. A summary of Dominion's marine project experience is included in Appendix D of this application.

In November 2010, Dominion completed its Virginia Offshore Wind Integration Study for VOWDA, which evaluated offshore wind total nameplate capacities of 2,700 and 4,500 MW connected to its Landstown 230 kV substation in south Virginia Beach. This preliminary study estimated that thermal overloads were likely during the "shoulder" seasons of spring and fall, when demand was at 80% of its summer peak and the offshore wind projects were generating at full capacity. The study estimated that these overloads could be avoided by investing between $30 million (to interconnect 2,700 MW) and $70 million (to interconnect 4,500 MW) in onshore 230 kV line upgrades.[3]

Dominion also has completed a Trunk Line Transmission Study, to evaluate options for an offshore, high-voltage trunk line that would support multiple offshore wind projects in the Virginia Wind Energy Area. The scope of this study included an evaluation of AC vs. HVDC configurations; offshore cable reliability, operation and maintenance issues; power flow and grid balancing considerations, and the approximate cost of building such a shared offshore transmission infrastructure.

Lisa Johnson
Senior Vice President and Chief Operating Officer at Old Dominion Electric Cooperative
VOWDA Board member

ODEC is a generation-and-transmission cooperative that provides wholesale power to its 11 member electric distribution cooperatives serving consumer-members in Virginia, Maryland and Delaware. ODEC or one of its member Distribution Cooperatives on the Virginia Eastern Shore currently owns, operates and maintains electric supply infrastructure in a marine environment, specifically five underwater cables ranging in voltage from 15 kV to 69kV.

Brian Redmond
Principal, CP Energy Group LLC
VOWDA Board member

During his career Mr. Redmond has negotiated, financed and successfully closed transactions with an aggregate value of over $6 billion where he was responsible for securing debt and equity and for negotiating the underlying project agreements for both renewable and conventional energy assets. In addition, Mr. Redmond has extensive experience representing sponsors, equity investors, and lenders in the development, operation, acquisition and disposition of energy projects. He serves on the Board of

[3] www.dmme.virginia.gov/DE/VOWDA/DominionOffShoreWindStudyReport.pdf

Directors for Deepwater Wind Holdings, LLC, a leading company in the development of offshore wind projects, Noble Environmental Power, which owns over 750MW of operating wind projects, and Centragas Pipeline S.C.A., which owns a 300 mile gas pipeline in The Republic of Colombia.

Ron Ritter
Retired Senior Vice President of Earl Industries, LLC
VOWDA Board member

In addition to repairing, maintaining, and modernizing structural, electrical, and mechanical systems on board U.S. Navy and commercial ships, Earl Industries' divisions and affiliated companies are leaders in electrical power generation and distribution systems. Specifically, Earl's wholly owned subsidiary, Earl Integrated Power and Controls, is an industry leader in electrical control panels, switchboards, power distribution, and full-scale automation systems. Also, Earl's affiliated company, Earl Energy, has designed and deployed power generation systems for the U.S. Defense Department that utilize alternative energy sources such as solar and wind energy, to supply electrical power to forward deployed troops.

Cathie France
DMME Deputy Director for Energy Policy
Lead support staff for VOWDA Board

Ms. France managed the permitting process for the construction of a 24-inch steel natural gas pipeline that was built underneath the Hampton Roads Harbor. The project required permits from the Army Corps of Engineers, the Virginia Marine Resources Commission, easements through Baylor Grounds controlled by the Virginia General Assembly, and local land use permits from the onshore localities on either side of the waterways. As part of the permitting process, Ms. France managed stakeholder outreach and the accommodation of many of other interests in the harbor, including discussions with the Virginia Maritime Association, the Virginia Port Authority and the Virginia Pilots' Association.

Ms. France also is DMME's technical manager of two DMME-funded contracts for test planning and site pre-development activities on Virginia's advanced technology demonstration project sites in state waters. This ongoing experience well qualifies DMME for managing similar activities on our proposed research lease in Federal waters.

The first DMME-funded project, led by the Virginia Tech Advanced Research Institute (VT-ARI) has two tasks directly relevant to the design and installation of metocean measurement and environmental monitoring platforms on the Virginia Research Lease Number 1 proposed herein. The first of these has identified three new designs for rapidly relocatable meteorological mast substructures and foundations. The second relevant task has produced a series of Meteorological Tower Placement Reports for VOWDA, the first in December 2010 [4] and an update in October 2011,[5] with a final anticipated in June 2012. These reports describe the types of metocean data needed to inform and accelerate commercial offshore wind project development in the Virginia Wind Energy Area, catalogue the various metocean data sources that are now available on Virginia's outer continental shelf, and provide an overview of the state-of-the-art in offshore wind resource assessment, including LIDAR measurement systems.

The second DMME-funded project, led by James Madison University (JMU), is scoped to characterize foundation conditions at wind turbine test pad sites in state waters; to characterize the wind resource and metocean design environment at these sites, to engage regulatory stakeholders and perform due diligence on environmental and community acceptability, and to prepare the documentation that would be needed to proceed with permitting of the proposed test pad sites. On 22 Feb 2012, BOEM requested a status report on this second project, which DMME provided as a Technical Capability Addendum on 14 Mar 2012. This correspondence and Addendum are included as Appendix E to this application.

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[4] ww.dmme.virginia.gov/DE/VOWDA/MeteorologicalTowerPlacementReport.pdf

[5] www.dmme.virginia.gov/DE/VOWDA/MetTowerUpdateReport.pdf

The JMU project includes three Virginia-based companies as subcontractors, all with considerable marine project experience: Fugro Atlantic, WeatherFlow, and Timmons Group. Fugro Atlantic is performing geological and geotechnical site characterization of possible turbine test pad sites in state waters, and has considerable experience in European offshore wind projects, as well as recently completing an analysis of offshore wind foundations and scour potential in a study funded by BOEM's Technology Assessment & Research Program (www.BOEM.gov/tarprojects/656.htm). WeatherFlow is performing wind resource assessment of possible turbine test pad sites in state waters, as well as developing a numerical model that can be used for forecasting meteorological conditions at each of these sites, as well as in the Virginia Wind Energy Area, which can inform the planning the installation and servicing of metocean platforms on the proposed Virginia Research Lease Number 1. Timmons Group is convening regulatory stakeholder meetings and gathering all required documentation to support permit applications for possible turbine test pad sites in state waters, including required Federal permits such as those issued by the Corps of Engineers under Section 10 of the Rivers and Harbors Act (regulating installation of structures in navigable waterways) and Section 404 of the Clean Water Act (regulating dredge and fill activities, such as might occur in gravity base foundation preparation or anti-scour rubble deposition).

DMME anticipates that these three companies also could be contracted in a competitive public-private partnership developed by DMME and VOWDA for similar work on our proposed research lease in Federal waters. Therefore, we also have provided their company information in Appendix D of this application, which describes relevant marine project qualifications, experience, and capabilities.

George Hagerman
Senior Research Associate, Virginia Tech Advanced Research Institute
Director of Research, Virginia Coastal Energy Research Consortium (VCERC)
BOEM Virginia Task Force member

George Hagerman has over 30 years experience researching renewable ocean energy systems, including offshore wind power, wave power, tidal current energy, and ocean thermal energy conversion. Hagerman currently is principal investigator for the DMME contract with the Virginia Tech Advanced Research Institute, which is described on the previous page. The DMME has a long history of collaborating and financially supporting wind energy research by Mr. Hagerman and others at Virginia universities.

As VCERC Director of Research, he coordinated the work at five universities to support a feasibility-level reference baseline design and cost estimate for a hypothetical offshore wind project off Virginia. He also was principal author of *Virginia Offshore Wind Studies, July 2007 to March 2010, Final Report*. His present focus areas are resource assessment, metocean extreme event analysis, site characterization, and energy cost modeling.

Mr. Hagerman has been invited to brief Federal and state regulatory agencies, and to testify before legislative committees of the U.S. Congress and the Virginia General Assembly. In 2009, the Minerals Management Service recognized his service with an Offshore Leadership Award.

Financial Capability

Financing plan for lease acquisition and initial site characterization activities: As stated in 30 CFR, Part 285, Section 238, paragraph (g), there is no acquisition cost for a research lease, but the lease holder does need to finance the cost of obtaining all required Federal authorizations, including BOEM approval of a General Activities Plan (GAP) and the cost of performing site characterization activities.

BOEM will require that the lease holder provide the results of a number of surveys with its GAP, including a shallow hazards survey (30 CFR 285.626 (a)(1)), a geological survey (30 CFR 285.616(a)(2)), a geotechnical survey (30 CFR 285.626(a)(4)), an archaeological resource survey (30 CFR 285.626(a)(5)), and biological surveys (30 CFR 285.626(a)(3)). BOEM will not consider approving a lease holder's GAP if the required survey information is not included. Therefore, we must budget for these surveys to be conducted between lease issuance and GAP submittal.

We anticipate a BOEM finding of no significant impact for metocean data platform construction and installation on sub-blocks 6014-B, 6014-C, 6164-N, and 6164-O of our proposed research lease, as these fall within the geographic scope of the BOEM Final Environmental Assessment for the Mid-Atlantic Wind Energy Areas, which indicates that the installation of such platforms is likely to be authorized by the U.S. Army Corps of Engineers under its Nationwide Permit 5 for scientific measurement devices. Thus we anticipate no permitting costs for obtaining Corps of Engineers authority to construct and install metocean data platforms on DMME Research Lease Number 1.

Section 328 of the Clean Air Act Amendments of 1990 (CAAA 1990) directs the U.S. Environmental Protection Agency (EPA) to regulate Outer Continental Shelf (OCS) sources that may affect the air quality of any state. Under 40 CFR Part 55, such OCS sources would include meteorological platforms and any vessels used to construct, install, service, or decommission such platforms, and any vessels conducting seafloor boring or geotechnical testing. This applies to OCS air emissions sources located within 25 nautical miles (nm) of a state's seaward boundary. Virginia's state boundary is located 3 nm offshore, and so this EPA regulation would NOT apply to vessels located on the proposed sites for our metocean data platforms or to any diesel generators on the platforms themselves, as sub-blocks 6014-B, 6014-C, 6164-N, and 6164-O are located more than 28 nm offshore.

Section 328 of the CAAA 1990 also treats emissions from vessels that are servicing or associated with the operations of OCS facilities as direct emissions from the OCS source when those vessels are at the source or en route to or from the source while within 25 nm of the source. As noted above, this would not apply to vessels while working at the proposed met tower sites, but it would apply to a large portion of their routes to and from the sites. Therefore, we must budget for a Clean Air Act permit from EPA Region 3.

Acoustic emissions during geophysical surveys and any pile driving activities for the metocean data platforms will require Incidental Harassment Authorization (IHA) from the National Marine Fisheries Service under the Marine Mammals Protection Act as amended in 1994. Since that time, the IHA program has been increasingly used for short-term activities that might inadvertently harass marine mammals. This program allows authorizations to be issued in 120 days.

The total cost for the above-described surveys and two authorizations (Clean Air Act permit for vessel emissions and IHA for temporary noise effects on marine mammals) is estimated by industry sources familiar with BOEM's geological, geophysical, and archeological survey guidance to be $5 million. DMME and VOWDA have access to several mechanisms for financing the cost of these initial activities and subsequent phases of research lease development.

Financing mechanisms for initial site characterization and subsequent phases: DMME has the authority to make and enter into all contracts and agreements necessary or incidental to the performance of its duties and the execution of its powers, including, but not limited to, contracts with the private sector, the United States, other state agencies and governmental subdivisions of the Commonwealth. The department also is authorized, consistent with Federal funding rules, to distribute energy-related Federal funds as grants or as loans to other state or non-state agencies for use in financing energy-related projects.

To support late-phase development and wind energy supply chain growth, the Commonwealth of Virginia has created financial incentives for manufacturing companies that create new jobs and renewable sources of energy generation. The Clean Energy Manufacturers Incentive Grant, for instance, can provide grants up to $36 million to manufacturers that invest at least $50 million and create 200 jobs. Wind energy suppliers can qualify if they invest $10 million and create 30 jobs.

VOWDA was created specifically to accelerate offshore wind development off of Virginia's coast and granted powers to provide and facilitate financing to support that mission. The Authority may establish public-private partnerships and share costs with developers for the following activities: the installation

and operation of wind resource and other metocean equipment, including light detection and ranging equipment, meteorological measurement towers, data collection platforms, the collection of avian and marine environmental data, the upgrade of port facilities and other logistical equipment sites to accommodate the manufacturing and assembly of offshore wind energy project components and vessels that will support the construction and operations of offshore wind energy projects.

The Virginia Resources Authority (VRA) has the authority to lend to local governments and to state-created authorities, such as VOWDA. Since its inception, VRA has funded more than 875 projects across the Commonwealth exceeding $4.2 billion of investment, an average of $4.8 million per project. Financing solutions include revolving fund loans at below-market interest rates and bonds backed by the moral obligation of the Commonwealth.

The Virginia Public Building Authority (VPBA) also provides financing for State projects, facilities and obligations that have been approved by the Governor and General Assembly. The VPBA is a political subdivision of the Commonwealth, authorized to issue bonds under the Virginia Public Building Authority Act of 1981 (the "Act"). The Authority was created by the Act for the purpose of financing, refinancing, constructing, improving, furnishing, maintaining, acquiring and operating public buildings for the use of the Commonwealth; and financing or refinancing capital projects that benefit the Commonwealth and any of its agencies, instrumentalities and political subdivisions. VPBA financed about $16 million in infrastructure improvements to the Virginia Commercial Space Flight Authority and Mid-Atlantic Regional Spaceport at Wallops Island.

Impeccable credit: Virginia has held its AAA bond rating for 70 years, longer than any other state. A state's bond rating serves as a measure of a state's financial and administrative status. Virginia's AAA bond rating, the best rating possible, is a reflection of the confidence placed in the Commonwealth's fiscal health. Virginia has earned the highest possible rating with three organizations. The Commonwealth's credit worthiness is rated as AAA by Standard and Poor's, Aaa by Moody's Investors Service, and AAA by Fitch Ratings.

The Pew Center on the States awarded Virginia the top overall grade for government performance in 2005 (along with Utah) and again in 2008 (along with Utah and Washington) based on their assessment of how well the state managed its people, money, infrastructure, and information. Virginia has long been recognized as one of the best-managed states in the nation according to these and similar criteria.

There have been no significant, relevant and adverse legal or regulatory actions taken against DMME in the last five years.

DMME has not filed for bankruptcy or been a target in other adverse financial proceedings with the last five years.

g) Regulation and Oversight of Activities

As required by CFR 30, Part 285, Section 238, Paragraph (d), the BOEM Director and the Governor of Virginia, or their authorized representatives, will negotiate the terms and conditions of any renewable energy lease, right-of-use (RUE), or right-of-way (ROW) grant that may be issued in response to this unsolicited application.

The framework for such negotiations, and standard terms and conditions of such leases, RUEs, or ROW grants may be set forth in a memorandum of agreement (MOA) or other agreement between BOEM and the Commonwealth of Virginia. The MOA will include the agreement of Virginia to assure that all of the Commonwealth's contractors and subcontractors will comply with these regulations, other applicable Federal laws, and all terms and conditions of such leases or grants.

CERTIFICATION

THAT I, Conrad T. Spangler, III, am authorized to bind the Commonwealth of Virginia Department of Mines, Minerals and Energy (DMME) in any matter related to the acquisition and operation of leases, right-of-way grants, or right-of-use and easement grants for activities that produce or support production, transportation, or transmission of energy from sources other than oil and gas on the OCS, to agree upon the terms of and to execute and deliver any instrument or agreement, including any application, bid, lease, plan, rights-of-way grant, rights-of-use and easement grant, bond or other financial assurance instrument, assignment, designation of operator, relinquishment, amendment, abandonment, power of attorney (including the revocation thereof), and any other paper related to such a lease, right-of- way, right-of-use, and easement.

[signature] Conrad T. Spangler, III, Director
Commonwealth of Virginia Department of Mines, Minerals and Energy

6/1/2012
[date]

Unsolicited Application for a Section 238 Research Lease
by the Virginia Department of Mines, Minerals and Energy

Research Lease Number 2 for Turbine Testing near the Virginia Call Area

This is the second unsolicited lease application submitted by the Department of Mines, Minerals and Energy (DMME), a state government agency of the Commonwealth of Virginia, to the Bureau of Ocean Energy Management (BOEM) of the United States Department of Interior, for a research lease in Federal waters off Virginia, as allowed by 30 CFR, Part 285, Section 238. The information provided below conforms to the general requirements for unsolicited lease applications as specified by 30 CFR, Part 285, Section 230, with the exception that there is no acquisition fee for a *research* lease, as indicated by 30 CFR, Part 285, Section 238, paragraph (g).

This is the newer of two applications that supersede the DMME application of 06 September 2011, which has been divided into two applications. The first is for Research Lease Number 1, for two metocean platforms in the Virginia Call Area. The second (this application) is for Research Lease Number 2, primarily for turbine testing, but also for testing metocean and environmental monitoring equipment.

(a) Area Requested for Lease

The DMME is requesting a Section 238 research lease for six (6) sub-blocks mapped in Figure 1 and listed in Table 1. These six sub-blocks could be used for siting up to six test turbines.

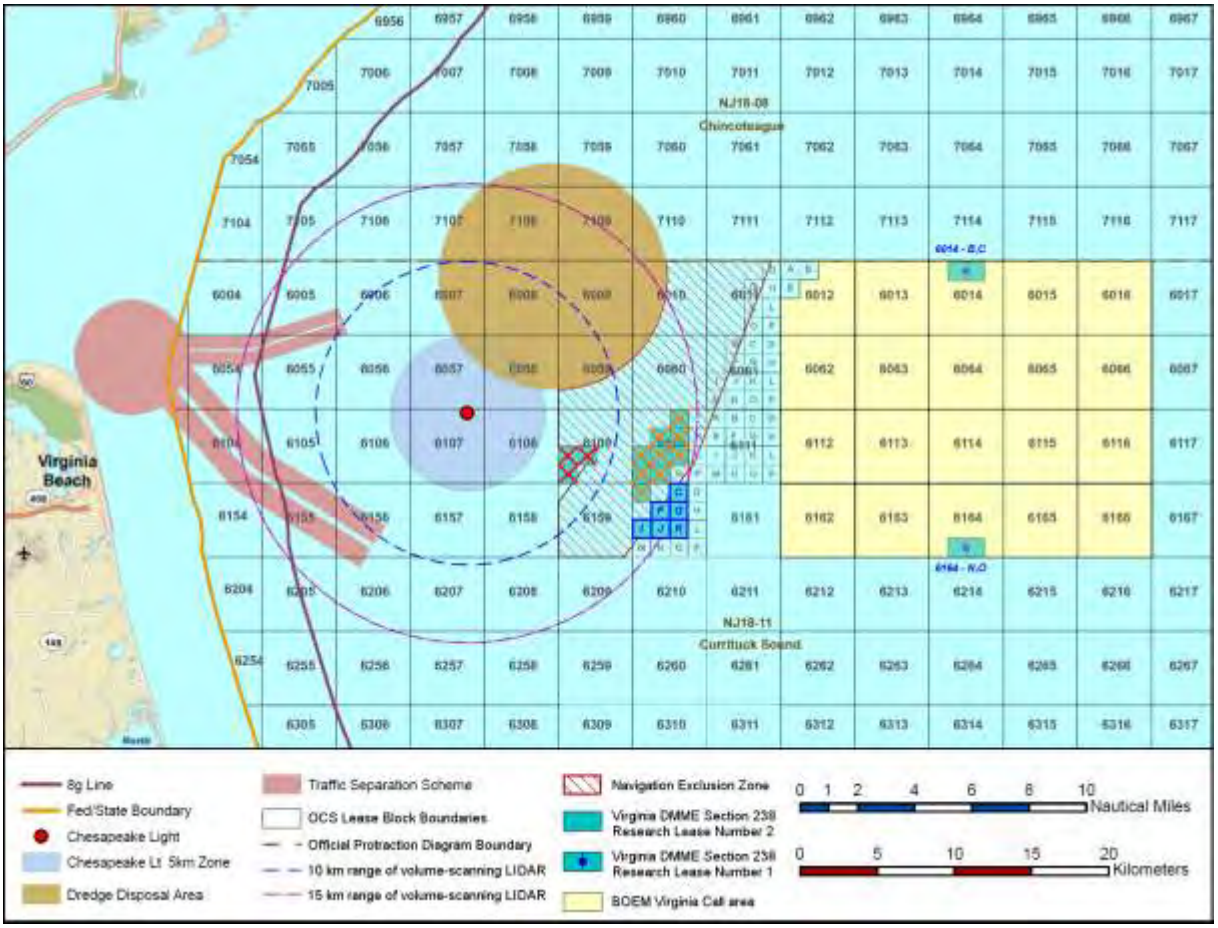

Figure 1. *Map showing six sub-blocks in this research lease application. Red and orange "X" symbols indicate Turbine Testing sub-blocks withdrawn from the DRAFT and REVISED applications, respectively.*

Table 1. List of Sub-Blocks Constituting Virginia's Proposed Research Lease Number 2

Protraction Diagram Name	Protraction Diagram Number	Research Purpose	Block Number	Sub-Block Letter
Currituck Sound	NJ18-11	Turbine Testing	6160	C, F, G, I, J, K

(b) General Description of Objectives and Facilities

This Section 238 research lease application proposes six sub-blocks to be leased for the siting of up to six demonstration turbines for testing advanced offshore wind technologies. In addition, this site may host one metocean and environmental monitoring platform for pre-and post-construction monitoring of wind velocities, water levels, waves, avian activities, and maritime vessel traffic in and around this lease.

The metocean platform would be a prototype for two similar platforms to be sited on DMME Research Lease Number 1. Being identical in design and construction will enable economies of serial fabrication and offshore mobilization and demobilization for their installation. These two platforms would have identical equipment payloads, enabling quantity discounts in ordering of metocean and environmental monitoring equipment, and it's important to test this equipment before placing quantity orders.

Data acquisition and analysis from this prototype platform will:

(1) Measure wind direction at ten heights above sea level: 30 m, 45 m, 60 m, 75 m, 90 m, 105 m, 120 m, 135 m, 150 m, and 165 m, using a pulsed, vertical-profiling LIDAR (e.g. Leosphere WindCube or SgurrEnergy Galion), to characterize the wind shear across the span of a wind turbine rotor 120 m in diameter, located at a hub height of 90 to 105 m above sea level. A selected LIDAR unit would be tested against tall mast measurements by calibrated cup anemometers prior to installation on this platform.

(2) Validate a volume-scanning LIDAR (e.g. the Lockheed-Martin WindTracer), which is anticipated to have a horizontal resolution of 100 m, a vertical resolution of 20 m, and a measurement range radius of 10 to 15 km. Validation data will be obtained by operating the volume-scanning LIDAR in "stare" mode and directing its focus onto a conventional anemometer mast on the Chesapeake Light Tower (as mapped in Figure 1).

(3) Measure still-water levels (e.g. with waves removed) and waves at the turbine test site, using a water level and wave probe, such as a capacitance staff (*e.g.*, RGR, Ltd. WG-50) or an ultrasonic rangefinder (*e.g.*, General Acoustics e.K. LOG_aLevel).

(4) Monitor bird and bat activity across the Call area, using marine avian radar system operating in both the X-band and S-band, to provide data on the pre- and post-construction flight behavior of resident pelagic birds and migrating shore birds and passerines.

(5) Monitor shipping vessel traffic density using an automatic identification system (AIS) tracker and data from the marine avian radar system, which will be ground-truthed by visual observers stationed on the Chesapeake Light Tower.

Additional equipment to be located near the prototype metocean platform include a directional wave measurement sensor, and an acoustic Doppler Current Profiler. Passive acoustic sensors also will be installed to monitor marine mammal activity and the level of background underwater infrasonic noise.

As shown in Figure 2, this research lease falls within the geographic scope of the BOEM Mid-Atlantic Final Environmental Assessment Alternative A for which BOEM had a Finding of No Significant Impact for lease issuance and site characterization activities,[1] which means that geotechnical borings can be undertaken as soon as the research lease is issued to DMME. This means that seabed conditions can be characterized this year, to support the design, fabrication, assembly, and installation of our intended prototype metocean platform in 2013.

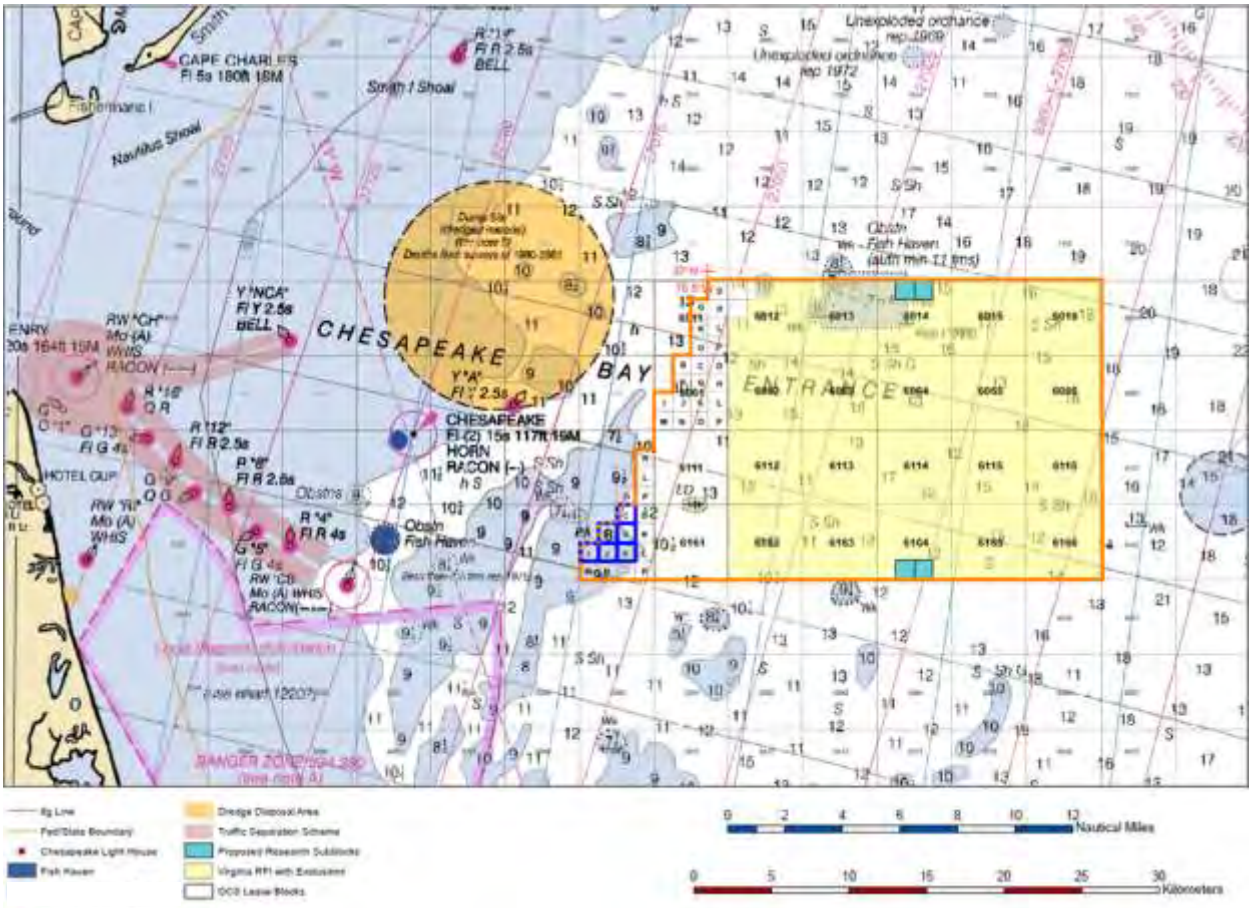

***Figure 2**. Nautical chart with overlay of BOEM lease blocks and sub-blocks. DMME Section 238 Research Lease Number 2 (blue-bordered sub-blocks) falls within the geographic scope of Alternative A (orange border) for which the BOEM Mid-Atlantic Final Environmental Assessment (EA) has a Finding of No Significant Impact for site characterization, which means that met tower installation and geotechnical borings can be undertaken, as long as they conform to the technical scope of activities in the Final EA.*

An important objective in siting test turbines within the requested sub-blocks is to minimize their potential hazard to maritime navigation. The eastern edge of this research lease is separated by a gap of 6 km (3.2 nautical miles) from the western border of the Virginia Wind Energy Area (WEA), to provide adequate sea room for barge traffic that uses deeper water to the east of the research lease as an inclement weather route. This site also is located well away from the natural deepwater navigation channel that trends southwest to northeast from the entrance to the Southern Approach of the Vessel Traffic Separation Scheme.

[1] Bureau of Ocean Energy Management, Office of Renewable Energy Programs. *Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore New Jersey, Delaware, Maryland, and Virginia – Final Environmental Assessment.* BOEM 2012-003, January 2012.

The Research Lease Number 2 site was identified by consensus after a series of meetings and conference calls among members of the BOEM Virginia Intergovernmental Task Force and maritime industry stakeholders in Hampton Roads that took place between November 2010 and March 2012, concurrent with the identification of the Virginia commercial offshore Wind Energy Area, for which BOEM issued a Call for Information and Nominations on 21 February 2012.

In order to convey the spatial scale of a demonstration project, Figures 3 and 4 illustrate the notional placement of three test turbines and six test turbines, respectively, showing how they can be moved around within the six lease blocks to further adjust their distance from important navigation routes. The three-turbine example illustrates a spacing of 1.8 km (0.97 nmi) between turbines, which corresponds to 12 rotor diameters for a 150-m diameter rotor. The six-turbine example illustrates a spacing of 1.2 km (0.65 nmi) between turbines, which corresponds to 8 rotor diameters.

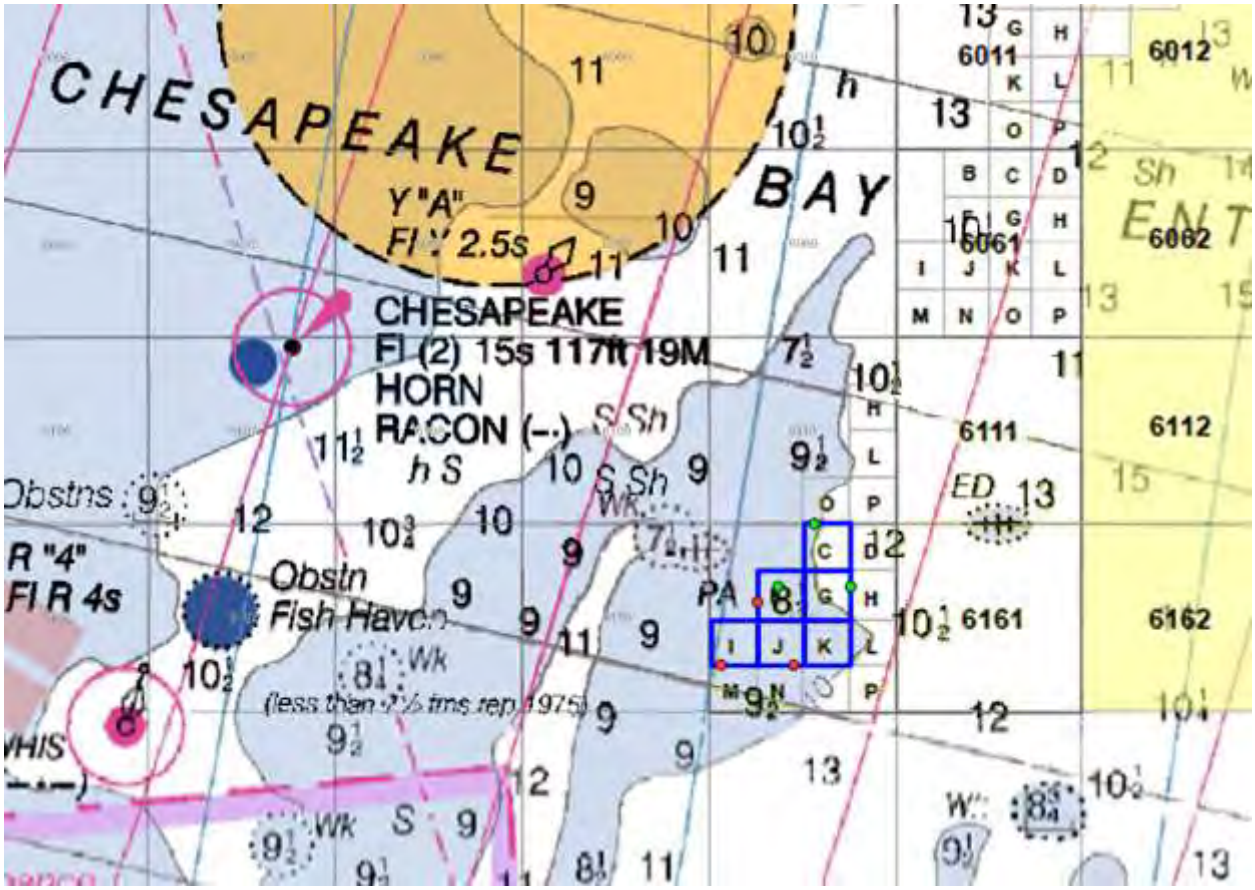

***Figure 3**. Example of two alternative notional placements of three equally-spaced turbines on research lease, with a distance of 1.8 km (0.97 nmi) between turbines. The green circles show a 3-turbine array located as far to the north and east as possible within this six-block research lease; the red circles show a 3-turbine array located as far to the south and west as possible within this lease. Depth soundings are in fathoms, and blue shading indicates depths shallower than 10 fathoms (60 ft or 18.3 m).*

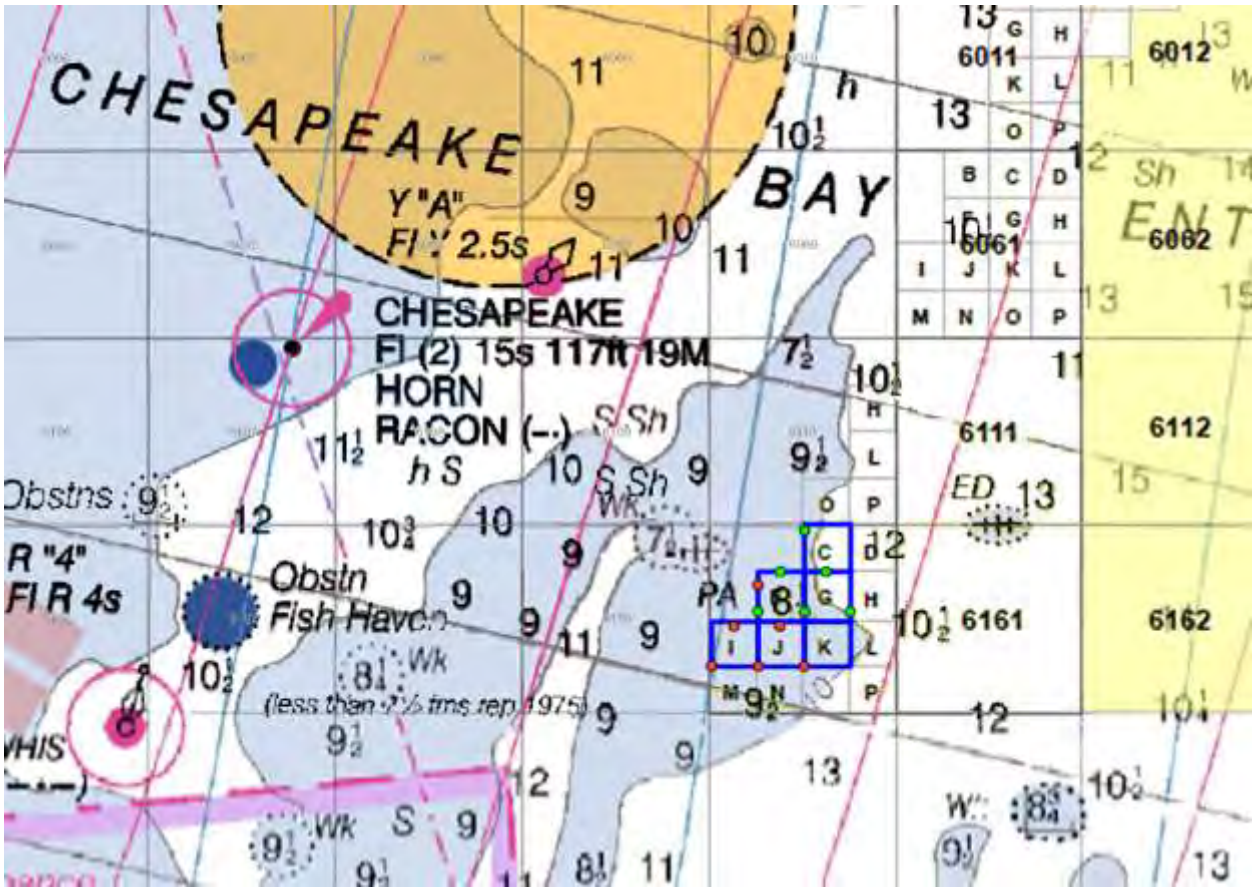

***Figure 4**. Example of two alternative notional placements of six equally-spaced turbines on research lease, with a distance of 1.2 km (0.65 nmi) between turbines. The green circles show a 6-turbine array located as far to the north and east as possible within this six-block research lease; the red circles show a 6-turbine array located as far to the south and west as possible within this lease. Depth soundings are in fathoms, and blue shading indicates depths shallower than 10 fathoms (60 ft or 18.3 m).*

(c) General Schedule of Proposed Activities

A prototype metocean and environmental monitoring platform on Research Lease No. 2 will be used to test and validate the equipment that ultimately will be deployed on the two "production" platforms at midpoints of the north and south borders of the Virginia Call Area (i.e., the two pairs of sub-blocks that comprise Research Lease No. 1). For example, we would test the accuracy of a volume-scanning LIDAR for mapping the commercial Call Area, by first putting one within range of the existing anemometer on the Chesapeake Light Tower (CLT), in an oceanic environment. A coastal validation test would not be representative of that far offshore aerosol environment.

Those same two "production" platforms should have radar for monitoring baseline avian activity before commercial project construction can begin in the Virginia Call Area. There is a need to have trained avian observers on the CLT in order to correlate measured radar signatures on the prototype platform with the numbers and species of birds they observe from the CLT.

Likewise, the "production" platforms should have passive acoustic sensors for monitoring baseline marine mammal activity in the Virginia Call Area. And again the CLT would serve as a ground truth platform for trained marine mammal observers who can correlate measured sound signatures on the prototype platform with the numbers and species of whales or dolphins they observe from the CLT.

Therefore, Research Lease Number 2 is needed for short-term testing and validation of prototype metocean sensors and environmental monitoring equipment that will then be deployed long-term on "production" platforms located farther offshore on the sub-blocks of Research Lease Number 1. Before a prototype platform can be installed on Research Lease Number 2, geophysical surveys and geotechnical testing must be conducted.

During late summer 2012, it is anticipated that geophysical and geotechnical (G&G) characterization of Research Lease Number 2 can be conducted by "vessels of opportunity" that will be transiting from the Gulf of Mexico to commercial project site surveys off Delaware, New Jersey, or Massachusetts.

Once a G&G characterization is available, a prototype metocean and environmental monitoring platform could be installed on this research lease and begin collecting data by the summer of 2013, contingent upon BOEM acceptance of a General Activities Plan and assuming that the platform conforms to the scope of the final regional Mid-Atlantic Environmental Assessment, which covers the six sub-blocks in Research Lease Number 2. A one-year design & build timetable is based on the experience of the NaiKun offshore wind project in designing, permitting, and installing a somewhat similar metocean platform in six months, off the coast of British Columbia.

The prototype platform will need to be on Research Lease Number 2 for at least six months before there would be sufficient equipment testing and validation data to inform the design of a final metocean and environmental package for the two "production" platforms to be sited on Research Lease Number 1. We anticipate that these test and validation data also will help support the design and installation of one or more offshore wind turbines … with the potential to eventually site six turbines … as shown in Figures 3 and 4 of this application.

We anticipate that the schedule of activities to plan, design, construct, and operate test turbines on Research Lease Number 2 will be similar to the schedule of activities published by the U.S. Department of Energy (DOE) Funding Opportunity Announcement (FOA) for U.S. Offshore Wind Advanced Technology Demonstration Projects. DOE will announce awards by the end of September 2012.

If the Virginia team is successful, it would follow the schedule below, as outlined in the DOE FOA, leading to the construction and operation of two 6-MW offshore wind turbines by year-end 2017. If the Virginia team is not successful, DMME still believes this is a realistic schedule, but the activities will be contingent on identifying funding and industry partners to proceed with a turbine testing project.

Phase I: DOE anticipates notifying applicants selected for a Phase I award by 31 August and making awards by 30 September 2012, subject to the availability of appropriations. Phase I conceivably could start as early as 01-Oct-2012, but based on previous DOE award-to-contract timelines, 01-Jan-2013 is more realistic. DOE anticipates five projects will be selected for Phase I, which has a performance period of approximately one year. Phase I activities will be directed towards the following outcomes:

- A 50% front-end engineering design (FEED) up to and including preliminary vendor quotes
- Identification of preliminary installation methods and identification of operating and maintenance systems suited to the site
- Initiation of all permitting or approval studies and illustration of a clear and realistic path to regulatory compliance and project completion including support for NEPA review
- Initiation of all necessary grid interconnection requirements, as well as any needed power off-take agreements. These include any applicable FERC interconnection requirements as well as any utility-specific requirements
- Succeeding in the DOE down-select from five to three projects at the end of Phase I

Phase II: Up to three projects will be selected for Phase II, which also has a performance period of approximately one year. Phase II activities will be directed towards the following outcomes:

- A 100% front-end engineering design (FEED) up to and including full vendor quotes from all suppliers and independent verification of all capital, O&M and regulatory costs and proposed schedule from a DOE-approved and applicant-financed third party
- Selection of detailed installation methods and selection of operating and maintenance systems suited to the site
- Completion of Federal agency NEPA process(es) and approval of a Construction and Operations Plan (COP) or equivalent in State Waters
- Completion of all necessary grid interconnection requirements, as well as any needed power off-take agreements. These include any applicable FERC interconnection requirements as well as any utility-specific requirements
- A successful project review at the end of Phase II

Phases III through V: Includes fabrication, installation and commissioning stages of the project and validation of operating performance, reliability and O&M costs. At the end of Phase V, the project will be generating power and delivering it to an electric power grid. The Phase III – V performance period will not exceed three years, and the project will be fully operational by year-end 2017.

(d) Renewable Energy Resource and Environmental Conditions in Area of Interest

As mapped by the most recent numerical modeling of this area by the National Renewable Energy Laboratory, the mean wind speed in the six sub-blocks of this proposed Research Lease Number 2 ranges from 8.0 to 8.5 m/s at an elevation of 90 m. A metocean extreme event analysis is now underway, but pending those results, the event that has produced the highest measured wind speed at the Chesapeake Light Tower during the 28-year period since measurements began there in 1984 is Hurricane Gloria, which passed offshore Virginia Beach on 26 September 1985, having a peak 10-minute average wind speed of 37.1 m/s (83 mph or 72 knots) at an elevation of 43.3 m (142 ft) above sea level, and a peak significant wave height of 6.2 m (20 ft). In 2003, Hurricane Isabel had a slightly lesser peak wind speed of 33.0 m/s (74 mph or 64 knots), but a slightly higher significant wave height of 6.34 m (21 ft).

Benthic habitat types, fish communities and other marine living resources have been mapped by the Nature Conservancy (TNC), as has commercial fishing effort based National Marine Fisheries Service (NMFS) vessel trip report data. Our proposed Section 238 lease does not coincide with any priority benthic habitat areas identified by TNC. Further, the NMFS data do not indicate that there would be major fisheries conflicts in this area. More study and stakeholder engagement, which are additional site characterization activities envisioned under this lease application, are needed to characterize the ecological resources in the local area encompassed within the proposed research lease.

(e) Conformance with State and Local Energy Planning Initiatives

A letter from the Governor of the Commonwealth of Virginia, Robert F. McDonnell, supporting the original 06 September 2011 unsolicited application for a DMME Research Lease is resubmitted with this application as Appendix A. The second paragraph of this letter is printed below, with italicized, bracketed comments indicating references to activities now delineated in separate revised DMME research lease applications:

> Activities to take place in the research lease areas, such as installation of data towers, along the edges of Virginia's commercial lease area [*referring to Lease Number 1*], could substantially reduce uncertainties in energy production estimates through earlier and more accurate wind measurements, and environmental data gathering, enabling our offshore wind resources, and the jobs associated with the offshore wind industry, to develop more quickly. Wind turbine test pads exposed to oceanic winds and waves installed (*sic*) would be used to demonstrate advanced offshore wind technologies [*referring to Lease Number 2*] that can lower the costs and reduce the risks associated with wind generation development.

This application also conforms to local energy assurance initiatives by the City of Virginia Beach, where having a source of power to the east, unconstrained by west-to-east bottlenecks in the transmission grid provides a more secure energy supply. This same energy reliability benefit also applies to regional Navy facilities, including four within the City limits of Virginia Beach. Moreover, Navy shore installations have been charged with an order from the Secretary of the Navy to obtain 50% of their electric power from new renewable energy sources by 2020.

Finally, the 2010 legislative session of the Virginia General Assembly passed a joint resolution that supports a goal of the development of 3,000 megawatts of offshore wind power by 2025.[2]

(f) Documentation of Lessee Qualifications

In response to states' comments on the draft rule, which qualified only the U.S. Department of Energy (DOE) to establish and manage renewable energy research areas on the Outer Continental Shelf, the then-named Minerals Management Service broadened this provision to apply to States and other Federal agencies in addition to DOE. Therefore, this application is being submitted by the Virginia Department of Mines, Minerals and Energy, as a state government agency of the Commonwealth of Virginia.

This section demonstrates that the Virginia DMME is legally eligible, and has the technical and financial capabilities to conduct the activities to be authorized by a Section 238 renewable energy research lease on the Outer Continental Shelf (OCS) according to the provisions of 30 CFR 285.106 and 285.107.

Legal Eligibility

The DMME is one of 13 executive agencies under the Office of the Virginia Secretary of Commerce and Trade, a Cabinet-level office that oversees the economic, community and workforce development of the Commonwealth. The DMME serves a large and varied group of people, organizations and agencies throughout the Commonwealth. Through its six divisions, the agency regulates the mineral industry, provides mineral research and offers advice on wise use of energy and mineral resources. Its programs directly serve the citizens who live near mining operations, mining labor groups, other regulatory agencies, the educational community, the energy and mineral industries, and environmental, consumer and industry special-interest groups. The Department's mission is to enhance the development and conservation of energy and mineral resources in a safe and environmentally sound manner in order to support a more productive economy in Virginia.

[2] http://lis.virginia.gov/cgi-bin/legp604.exe?111+ful+HJ605ER

The Commonwealth already has successfully demonstrated its legal eligibility to hold a lease as defined in 30 CFR 285.112 and further explained in 30 CFR 285.106 and 107. Submitted as Appendix B of this application is a letter dated 14 Feb 2011, which states that BOEM recognizes DMME as legally qualified to acquire and hold a renewable energy lease or grant on the OCS, and indicates that the DMME legal qualification documents are contained in a file identified as AEAU Company Number 15014.

Technical Capability

The Virginia Offshore Wind Development Authority (VOWDA) and the DMME will be directly involved in management of activities to be undertaken on the proposed research lease. VOWDA was created as a body corporate and a political subdivision of the Commonwealth[3] for the purposes 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 associated supply chain vendors by collecting relevant metocean and environmental data, by identifying existing state and regulatory or administrative barriers to the development of the offshore wind energy industry, by 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 by ensuring that the development of such 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 following key personnel would be directly involved on the Commonwealth of Virginia's technical management team for this project, including six VOWDA Board members, one DMME employee, and one VCERC researcher. Their names, titles, and descriptions of relevant experience are given below, and their resumes are included in Appendix C of this application.

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

Arthur W. Moye Jr is Executive Vice President of the Virginia Maritime Association, which, with its almost 500 members, serves as the "Voice of the Port." Mr. Moye also serves as the Executive Vice President of the Hampton Roads Shipping Association, whose purpose is to negotiate and maintain the collective bargaining agreement with the International Longshoremen's Association (ILA). Prior to his current position, he has served as an Officer and Director for both organizations during his 30 years in the maritime industry employed with one of the Port's stevedoring companies. Mr. Moye is well positioned to facilitate meetings with maritime interests during preparation of our General Activities Plan, which will help ensure that the detailed siting of our proposed test turbines do not create a hazard to navigation.

Joan Bondareff
Of Counsel, Blank Rome LLP
VOWDA Board Vice Chair

Joan M. Bondareff has more than 30 years of experience successfully managing programs and personnel, including eight years of Congressional legislative experience, with oversight of Coast Guard and transportation programs. She has served as Chief Counsel of a federal agency, Senior Counsel to a House Committee, and Environment and Energy Team Leader of a major Washington, DC consulting firm. Ms. Bondareff drafted legislation on several environmental and maritime subjects, including the Oil Pollution Act of 1990, Coastal Zone Management Act Reauthorization Amendments of 1990, the National Maritime Heritage Act, the Antarctic Conservation Act, and the Abandoned Shipwreck Act. She also obtained a $6 million federal grant for a Mid-West regional port in 2010.

[3] http://lis.virginia.gov/cgi-bin/legp604.exe?000+cod+67-1201

Mary Doswell
Senior Vice President, Alternative Energy Solutions Dominion Resources
VOWDA Board member

Dominion is one of the nation's largest producers and transporters of energy, with a portfolio of approximately 28,200 megawatts of generation, 11,000 miles of natural gas transmission, gathering and storage pipeline and 6,300 miles of electric transmission lines. Dominion operates the nation's largest natural gas storage system with 947 billion cubic feet of storage capacity and serves retail energy customers in 15 states.

Dominion has considerable experience with design, construction, and operation of marine energy projects, including a marine liquefied natural gas (LNG) terminal in the Chesapeake Bay, several hydroelectric power stations, and a variety of underwater power cables for transmission and distribution over a wide range of voltages. A summary of Dominion's marine project experience is included in Appendix D of this application.

In November 2010, Dominion completed its Virginia Offshore Wind Integration Study for VOWDA, which evaluated grid impacts if offshore wind total nameplate capacities of 2,700 and 4,500 MW were connected to its Landstown 230 kV substation in south Virginia Beach. This preliminary study estimated that, absent transmission infrastructure upgrades, the addition of this new generation likely would result in thermal overloads during the "shoulder" seasons of spring and fall, when demand was at 80% of its summer peak and the offshore wind projects were generating at full capacity. The study estimated that these overloads could be avoided by investing between $30 million (to interconnect 2,700 MW) and $70 million (to interconnect 4,500 MW) in onshore 230 kV line upgrades.[4]

Dominion also has completed a Trunk Line Transmission Study, to evaluate options for an offshore, high-voltage trunk line that would support multiple offshore wind projects in the Virginia Wind Energy Area. The scope of this study included an evaluation of AC vs. HVDC configurations; offshore cable reliability, operation and maintenance issues; power flow and grid balancing considerations, and the approximate cost of building such a shared offshore transmission infrastructure.

Lisa Johnson
Senior Vice President and Chief Operating Officer at Old Dominion Electric Cooperative
VOWDA Board member

ODEC is a generation-and-transmission cooperative that provides wholesale power to its 11 member electric distribution cooperatives serving consumer-members in Virginia, Maryland and Delaware. ODEC or one of its member Distribution Cooperatives on the Virginia Eastern Shore currently owns, operates and maintains electric supply infrastructure in a marine environment, specifically five underwater cables ranging in voltage from 15 kV to 69kV.

Brian Redmond
Principal, CP Energy Group LLC
VOWDA Board member

During his career Mr. Redmond has negotiated, financed and successfully closed transactions with an aggregate value of over $6 billion where he was responsible for securing debt and equity and for negotiating the underlying project agreements for both renewable and conventional energy assets. In addition, Mr. Redmond has extensive experience representing sponsors, equity investors, and lenders in the development, operation, acquisition and disposition of energy projects. He serves on the Board of Directors for Deepwater Wind Holdings, LLC, a leading company in the development of offshore wind projects, Noble Environmental Power, which owns over 750MW of operating wind projects, and Centragas Pipeline S.C.A., which owns a 300 mile gas pipeline in The Republic of Colombia.

[4] www.dmme.virginia.gov/DE/VOWDA/DominionOffShoreWindStudyReport.pdf

Ron Ritter
Retired Senior Vice President of Earl Industries, LLC
VOWDA Board member

In addition to repairing, maintaining, and modernizing structural, electrical, and mechanical systems on board U.S. Navy and commercial ships, Earl Industries' divisions and affiliated companies are leaders in electrical power generation and distribution systems. Specifically, Earl's wholly owned subsidiary, Earl Integrated Power and Controls, is an industry leader in electrical control panels, switchboards, power distribution, and full-scale automation systems. Also, Earl's affiliated company, Earl Energy, has designed and deployed power generation systems for the U.S. Defense Department that utilize alternative energy sources such as solar and wind energy, to supply electrical power to forward deployed troops.

Cathie France
DMME Deputy Director for Energy Policy
Lead support staff for VOWDA Board

Ms. France managed the permitting process for the construction of a 24-inch steel natural gas pipeline that was built underneath the Hampton Roads Harbor. The project required permits from the Army Corps of Engineers, the Virginia Marine Resources Commission, easements through Baylor Grounds controlled by the Virginia General Assembly, and local land use permits from the onshore localities on either side of the waterways. As part of the permitting process, Ms. France managed stakeholder outreach and the accommodation of many of other interests in the harbor, including discussions with the Virginia Maritime Association, the Virginia Port Authority and the Virginia Pilots' Association.

Ms. France also is DMME's technical manager of two DMME-funded contracts for test planning and site pre-development activities on Virginia's advanced technology demonstration project sites in state waters. This ongoing experience well qualifies DMME for managing similar activities on our proposed research lease in Federal waters.

The first DMME-funded project, led by the Virginia Tech Advanced Research Institute (VT-ARI) has two tasks directly relevant to the design and installation of metocean measurement and environmental monitoring platforms on the Virginia Research Lease Number 1 proposed herein. The first of these has identified three new designs for rapidly relocatable meteorological mast substructures and foundations. The second relevant task has produced a series of Meteorological Tower Placement Reports for VOWDA, the first in December 2010 [5] and an update in October 2011,[6] with a final anticipated in June 2011. These reports describe the types of metocean data needed to inform and accelerate commercial offshore wind project development in the Virginia Wind Energy Area, catalogue the various metocean data sources that are now available on Virginia's outer continental shelf, and provide an overview of the state-of-the-art in offshore wind resource assessment, including LIDAR measurement systems.

The second DMME-funded project, led by James Madison University (JMU), is scoped to characterize foundation conditions at the wind turbine test pad sites; to characterize the wind resource and metocean design environment at these sites, to engage regulatory stakeholders and perform due diligence on environmental and community acceptability, and to prepare the documentation that would be needed to proceed with permitting of the proposed test pad sites. On 22 Feb 2012, BOEM requested a status report on this second project, which DMME provided as a Technical Capability Addendum on 14 Mar 2012. This correspondence and Addendum are included as Appendix E to this application.

The JMU project includes three Virginia-based companies as subcontractors, all with considerable marine project experience: Fugro Atlantic, WeatherFlow, and Timmons Group. Fugro Atlantic is performing geological and geotechnical site characterization of possible turbine test pad sites in state waters, and has

[5] ww.dmme.virginia.gov/DE/VOWDA/MeteorologicalTowerPlacementReport.pdf

[6] www.dmme.virginia.gov/DE/VOWDA/MetTowerUpdateReport.pdf

considerable experience in European offshore wind projects, as well as recently completing an analysis of offshore wind foundations and scour potential in a study funded by BOEM's Technology Assessment & Research Program (www.BOEM.gov/tarprojects/656.htm). WeatherFlow is performing wind resource assessment of possible turbine test pad sites in state waters, as well as developing a numerical model that can be used for forecasting meteorological conditions at each of these sites, as well as in the Virginia Wind Energy Area, which can inform the planning the installation and servicing of test turbines on the proposed Virginia Research Lease Number 2. Timmons Group is convening regulatory stakeholder meetings and gathering all required documentation to support permit applications for possible turbine test pad sites in state waters, including required Federal permits such as those issued by the Corps of Engineers under Section 10 of the Rivers and Harbors Act (regulating installation of structures in navigable waterways) and Section 404 of the Clean Water Act (regulating dredge and fill activities, such as might occur in gravity base foundation preparation or anti-scour rubble deposition).

George Hagerman
Senior Research Associate, Virginia Tech Advanced Research Institute
Director of Research, Virginia Coastal Energy Research Consortium (VCERC)
BOEM Virginia Task Force member

George Hagerman has over 30 years experience researching renewable ocean energy systems, including offshore wind power, wave power, tidal current energy, and ocean thermal energy conversion. Hagerman currently is principal investigator for the DMME contract with the Virginia Tech Advanced Research Institute, which is described on the previous page. The DMME has a long history of collaborating and financially supporting wind energy research by Mr. Hagerman and others at Virginia universities.

As VCERC Director of Research, he coordinated the work at five universities to support a feasibility-level reference baseline design and cost estimate for a hypothetical offshore wind project off Virginia. He also was principal author of *Virginia Offshore Wind Studies, July 2007 to March 2010, Final Report*. His present focus areas are resource assessment, metocean extreme event analysis, site characterization, and energy cost modeling.

Mr. Hagerman has been invited to brief Federal and state regulatory agencies, and to testify before legislative committees of the U.S. Congress and the Virginia General Assembly. In 2009, the Minerals Management Service recognized his service with an Offshore Leadership Award.

Financial Capability

Financing plan for lease acquisition and initial site characterization activities: As stated in 30 CFR, Part 285, Section 238, paragraph (g), there is no acquisition cost for a research lease, but the lease holder does need to finance the cost of obtaining all required Federal authorizations, including BOEM approval of a General Activities Plan (GAP) and the cost of performing site characterization activities.

BOEM will require that the lease holder provide the results of a number of surveys with its GAP, including a shallow hazards survey (30 CFR 285.626 (a)(1)), a geological survey (30 CFR 285.616(a)(2)), a geotechnical survey (30 CFR 285.626(a)(4)), an archaeological resource survey (30 CFR 285.626(a)(5)), and biological surveys (30 CFR 285.626(a)(3)). BOEM will not consider approving a lease holder's GAP if the required survey information is not included. Therefore, we must budget for these surveys to be conducted between lease issuance and GAP submittal.

We anticipate a BOEM finding of no significant impact for metocean data platform construction and installation on sub-blocks 6014-B, 6014-C, 6164-N, and 6164-O of our proposed research lease, as these fall within the geographic scope of the BOEM Final Environmental Assessment for the Mid-Atlantic Wind Energy Areas, which indicates that the installation of such platforms is likely to be authorized by the U.S. Army Corps of Engineers under its Nationwide Permit 5 for scientific measurement devices.

Thus we anticipate no permitting costs for obtaining Corps of Engineers authority to construct and install metocean data platforms on DMME Research Lease Number 1.

Section 328 of the Clean Air Act Amendments of 1990 (CAAA 1990) directs the U.S. Environmental Protection Agency (EPA) to regulate Outer Continental Shelf (OCS) sources that may affect the air quality of any state. Under 40 CFR Part 55, such OCS sources would include meteorological platforms and any vessels used to construct, install, service, or decommission such platforms, and any vessels conducting seafloor boring or geotechnical testing. This applies to OCS air emissions sources located within 25 nautical miles (nm) of a state's seaward boundary. Virginia's state boundary is located 3 nm offshore, and so this EPA regulation would NOT apply to vessels located on the proposed sites for our metocean data platforms or to any diesel generators on the platforms themselves, as sub-blocks 6014-B, 6014-C, 6164-N, and 6164-O are located more than 28 nm offshore.

Section 328 of the CAAA 1990 also treats emissions from vessels that are servicing or associated with the operations of OCS facilities as direct emissions from the OCS source when those vessels are at the source or en route to or from the source while within 25 nm of the source. As noted above, this would not apply to vessels while working at the proposed met tower sites, but it would apply to a large portion of their routes to and from the sites. Therefore, we must budget for a Clean Air Act permit from EPA Region 3.

Acoustic emissions during geophysical surveys and any pile driving activities for the metocean data platforms will require Incidental Harassment Authorization (IHA) from the National Marine Fisheries Service under the Marine Mammals Protection Act as amended in 1994. Since that time, the IHA program has been increasingly used for short-term activities that might inadvertently harass marine mammals. This program allows authorizations to be issued in 120 days.

The total cost for the above-described surveys and two authorizations (Clean Air Act permit for vessel emissions and IHA for temporary noise effects on marine mammals) is estimated by industry sources familiar with BOEM's geological, geophysical, and archeological survey guidance to be $5 million. DMME and VOWDA have access to several mechanisms for financing the cost of these initial activities and subsequent phases of research lease development.

Financing mechanisms for initial site characterization and subsequent phases: DMME has the authority to make and enter into all contracts and agreements necessary or incidental to the performance of its duties and the execution of its powers, including, but not limited to, contracts with the private sector, the United States, other state agencies and governmental subdivisions of the Commonwealth. The department also is authorized, consistent with Federal funding rules, to distribute energy-related Federal funds as grants or as loans to other state or non-state agencies for use in financing energy-related projects.

To support late-phase development and wind energy supply chain growth, the Commonwealth of Virginia has created financial incentives for manufacturing companies that create new jobs and renewable sources of energy generation. The Clean Energy Manufacturers Incentive Grant, for instance, can provide grants up to $36 million to manufacturers that invest at least $50 million and create 200 jobs. Wind energy suppliers can qualify if they invest $10 million and create 30 jobs.

VOWDA was created specifically to accelerate offshore wind development off of Virginia's coast and granted powers to provide and facilitate financing to support that mission. The Authority may establish public-private partnerships and share costs with developers for the following activities: the installation and operation of wind resource and other metocean equipment, including light detection and ranging equipment, meteorological measurement towers, data collection platforms, the collection of avian and marine environmental data, the upgrade of port facilities and other logistical equipment sites to accommodate the manufacturing and assembly of offshore wind energy project components and vessels that will support the construction and operations of offshore wind energy projects.

The Virginia Resources Authority (VRA) has the authority to lend to local governments and to state-created authorities, such as VOWDA. Since its inception, VRA has funded more than 875 projects across the Commonwealth exceeding $4.2 billion of investment, an average of $4.8 million per project. Financing solutions include revolving fund loans at below-market interest rates and bonds backed by the moral obligation of the Commonwealth.

The Virginia Public Building Authority (VPBA) also provides financing for State projects, facilities and obligations that have been approved by the Governor and General Assembly. The VPBA is a political subdivision of the Commonwealth, authorized to issue bonds under the Virginia Public Building Authority Act of 1981 (the "Act"). The Authority was created by the Act for the purpose of financing, refinancing, constructing, improving, furnishing, maintaining, acquiring and operating public buildings for the use of the Commonwealth; and financing or refinancing capital projects that benefit the Commonwealth and any of its agencies, instrumentalities and political subdivisions. VPBA financed about $16 million in infrastructure improvements to the Virginia Commercial Space Flight Authority and Mid-Atlantic Regional Spaceport at Wallops Island.

Impeccable credit: Virginia has held its AAA bond rating for 70 years, longer than any other state. A state's bond rating serves as a measure of a state's financial and administrative status. Virginia's AAA bond rating, the best rating possible, is a reflection of the confidence placed in the Commonwealth's fiscal health. Virginia has earned the highest possible rating with three organizations. The Commonwealth's credit worthiness is rated as AAA by Standard and Poor's, Aaa by Moody's Investors Service, and AAA by Fitch Ratings.

The Pew Center on the States awarded Virginia the top overall grade for government performance in 2005 (along with Utah) and again in 2008 (along with Utah and Washington) based on their assessment of how well the state managed its people, money, infrastructure, and information. Virginia has long been recognized as one of the best-managed states in the nation according to these and similar criteria.

There have been no significant, relevant and adverse legal or regulatory actions taken against DMME in the last five years.

DMME has not filed for bankruptcy or been a target in other adverse financial proceedings with the last five years.

g) Regulation and Oversight of Activities

As required by CFR 30, Part 285, Section 238, Paragraph (d), the BOEM Director and the Governor of Virginia, or their authorized representatives, will negotiate the terms and conditions of any renewable energy lease, right-of-use (RUE), or right-of-way (ROW) grant that may be issued in response to this unsolicited application.

The framework for such negotiations, and standard terms and conditions of such leases, RUEs, or ROW grants may be set forth in a memorandum of agreement (MOA) or other agreement between BOEM and the Commonwealth of Virginia. The MOA will include the agreement of Virginia to assure that all of the Commonwealth's contractors and subcontractors will comply with these regulations, other applicable Federal laws, and all terms and conditions of such leases or grants.

CERTIFICATION

THAT I, Conrad T. Spangler, III, am authorized to bind the Commonwealth of Virginia Department of Mines, Minerals and Energy (DMME) in any matter related to the acquisition and operation of leases, right-of-way grants, or right-of-use and easement grants for activities that produce or support production, transportation, or transmission of energy from sources other than oil and gas on the OCS, to agree upon the terms of and to execute and deliver any instrument or agreement, including any application, bid, lease, plan, rights-of-way grant, rights-of-use and easement grant, bond or other financial assurance instrument, assignment, designation of operator, relinquishment, amendment, abandonment, power of attorney (including the revocation thereof), and any other paper related to such a lease, right-of- way, right-of-use, and easement.

_____

[signature] Conrad T. Spangler, III, Director
Commonwealth of Virginia Department of Mines, Minerals and Energy

_____

[date]

APPENDIX D

REQUEST FOR INFORMATION ON THE STATE OF THE OFFSHORE RENEWABLE ENERGY INDUSTRY – AUCTION FORMAT INFORMATION REQUEST (AFIR)

- **FEDERAL REGISTER NOTICE (12/6/11)**
- **VOWDA COMMENT LETTER (1/18/12)**
- **DMME COMMENT LETTER (1/19/12)**

	Number of respondents	Annual responses	×	Hours per response	Burden hours
Reporting Burden	35	50		58	1,010

Total Estimated Burden Hours: 1,010.
Status: New collection.

Authority: Section 3507 of the Paperwork Reduction Act of 1995, 44 U.S.C. 35, as amended.

Dated: November 23, 2011.

Colette Pollard,

Departmental Reports Management Officer, Office of the Chief Information Officer.

[FR Doc. 2011–31259 Filed 12–5–11; 8:45 am]

BILLING CODE 4210–67–P

DEPARTMENT OF THE INTERIOR

Bureau of Ocean Energy Management

[Docket BOEM–2011–0095]

Request for Information on the State of the Offshore Renewable Energy Industry—Auction Format Information Request (AFIR)

AGENCY: Bureau of Ocean Energy Management (BOEM), Interior.

ACTION: Request for information.

SUMMARY: BOEM invites public comment on a proposed set of auction formats which may be used to issue commercial renewable energy leases on the Outer Continental Shelf (OCS). BOEM is examining several auction formats, each designed to efficiently issue renewable energy leases to those who value them most and are best positioned to develop them, while also ensuring that the government receives a fair return in exchange. BOEM is focusing primarily on variations of Ascending Clock Auctions and Package Auctions formats described in more detail below. BOEM is also considering a multiple factor auction approach in which bidders can earn a discount on their bids submitted under one of the auction formats noted above, based on company-specific attributes deemed relevant to the success of their projects. The auction format selected for each sale area would likely vary based on the actual characteristics of that sale. Such characteristics could include the size and homogeneity of the area to be offered. BOEM will hold a workshop to help familiarize stakeholders with the auction format options and to solicit feedback on Friday, December 16, 2011, at the South Interior Building in Washington, DC.

DATES: Comments should be submitted electronically or postmarked no later than January 20, 2012. All written comments received during the comment period will be made available to the public and considered during preparation of Proposed Sale Notices (PSN) pertaining to the competitive leasing of OCS lands to support the development of offshore wind energy resources.

ADDRESSES: Potential auction participants, Federal, state, and local government agencies, tribal governments, and other interested parties are requested to submit their written comments on the contents of this AFIR in one of the following ways:

1. *Electronically: http://www.regulations.gov.* In the entry titled "Enter Keyword or ID," enter BOEM–2011–0095 then click "search." Follow the instructions to submit public comments and view supporting and related materials available for this document.

2. *Written Comments:* In written form, delivered by hand or by mail, enclosed in an envelope labeled "Comments on Offshore Wind AFIR" to: Economics Division, Bureau of Ocean Energy Management, 381 Elden Street, MS 4050, Herndon, Virginia 20170–4817.

FOR FURTHER INFORMATION CONTACT: Greg Adams, BOEM Economics Division, 381 Elden Street, MS 4050, Herndon, Virginia 20170–4817, (703) 787–1537 or *greg.adams@boem.gov;* or Wright Frank, BOEM Office of Renewable Energy Programs, 381 Elden Street, HM 1328, Herndon, Virginia 20170, (703) 787–1325 or *wright.frank@boem.gov.*

SUPPLEMENTARY INFORMATION:

Authority

This request for information is published pursuant to subsection 8(p) of the OCS Lands Act (43 U.S.C. 1337(p)), as amended by section 388 of the Energy Policy Act of 2005 (EPAct) and the implementing regulations at 30 CFR 585.116, which authorize the Director of BOEM to solicit information from industry and other relevant stakeholders to evaluate the state of the offshore renewable energy industry, including economic matters that promote or detract from continued development. The information received may be used to evaluate program options to promote safe and environmentally responsible development in a manner that ensures a fair value for use of the nation's OCS.

Purpose of the AFIR

The purpose of this information request is to invite public comment on the auction format options described in this request. Due to the complexities associated with lease valuation and optimal lease configurations, renewable energy leasing will require more diverse approaches than the sealed-bid, cash bonus approach used to issue offshore oil and gas leases.

The auction formats and their specifications are designed to address important program objectives, including:

- *Fair Return:* BOEM is statutorily required to obtain a "fair return" for leases and grants on the OCS;
- *Economic Efficiency:* The lease auction process should try to ensure that commercial renewable energy leases on the OCS are awarded to those who value the areas the most;
- *Program Efficiency:* The lease auction process must be manageable for BOEM to administer;
- *Lease Boundary Flexibility:* Within constraints fixed by BOEM, the auction should allow bidders to identify the optimal lease areas;
- *Competition:* The lease auction process must be fair, and encourage participation from all interested bidders;
- *Transparency:* The lease auction process must be an open one in which bids are comparable and the reason why the winners won is clear;
- *Neutrality:* The lease auction process must ensure that all bidders are treated equally;
- *Simplicity:* The lease auction process must be easily understood and implemented, by both the bidders and BOEM; and
- *Consistency:* The lease auction process should be applicable to the issuance of leases in a variety of potential renewable energy development contexts.

BOEM contracted with Power Auctions LLC to study auction formats for issuing renewable energy leases (hereinafter, "Ausubel and Cramton (2011a), (2011b), and (2011c)," respectively). Based on its findings and BOEM's own internal research, BOEM has identified several potentially suitable auction formats. A more comprehensive discussion of these auction formats prepared by BOEM staff, along with the Power Auctions LLC study, can be found on BOEM's

Web site at *http://www.boem.gov/Renewable-Energy-Program/Regulatory-Information/Renewable-Energy-Auction-Formats.aspx*.

Preference for Bidding on the Cash Bonus

Although BOEM has the authority to conduct an auction with either the cash bonus or operating fee rate as the bid variable, the bureau generally prefers using the cash bonus. Conducting an auction with the bonus bid as the variable has a number of benefits. It allows straightforward comparison of competing offers and tends to award leases to developers with good financial backing. Because the winning bidders would need to pay the bonus bid before the lease is issued, it prevents undercapitalized bidders from committing to a greater payment than they can afford. Refer to Section 2.3 in Ausubel and Cramton (2011a) for further discussion.

Single Lot Auctions: Simple Ascending Clock Auction Format

In a single lot auction, there is only one object of bidding ("lot"), and the entire lease area would be auctioned off as a single entity. BOEM could use a single lot auction in situations where it is expected that only one lease would be practical for the available acreage, because the area would not be large enough to support multiple projects.

In a single lot auction utilizing an ascending clock auction format, BOEM would set an initial asking price for the single lot, and bidders would indicate whether or not they are interested in bidding for that lot at that price. If BOEM received more than one bid, BOEM would increase the asking price, which "ticks" up like a clock, until only a single bidder is willing to meet the announced price. This format enables price discovery by the bidders during the auction and reduces the guesswork required for bidders to value offshore leases.

One complication of the simple ascending clock auction is that a tie-breaking procedure is needed when all the remaining bidders drop out in the same round. Exit bids are one practical way of solving this problem in the single lot case. An exit bid allows bidders who are unwilling to meet the next round's bid price to specify the maximum price they would be willing to pay short of the new asking price. If all remaining bidders drop out from one round to the next, the bidder with the highest exit bid would prevail. Another tie-breaking procedure would be for BOEM to incrementally reduce the current asking price until one bidder bids. In either approach, if the tie persists after the tie-breaking procedure, the winner could be determined based on a random draw. Refer to Section 5.2 in Ausubel and Cramton (2011c) for further discussion.

Multiple Lot Auctions: Simultaneous Ascending Clock Auction Format

In most lease sales, BOEM expects to issue multiple commercial renewable energy leases in the same auction. In this case, BOEM is considering the use of a Simultaneous Ascending Clock Auction (SACA).

In such a lease sale, BOEM would divide the entire area offered for leasing into smaller lots which would be the objects of the bidding. To form the lots, BOEM would likely use OCS lease blocks (approximately 3 statute miles by 3 statute miles), aliquots (squares 1/16th that size), or some combination of these. The auction would enable bidding on all of the lots simultaneously.

BOEM would set a minimum asking price for each lot. Bidders would bid on the combination of lots they are interested in at that price. The bid price set by BOEM for contested lots (those receiving two or more bids) would increase in the next round, while the price for uncontested lots (those receiving zero or one bid) would remain the same in the next round. BOEM would publish the announced prices and the number of bids on each lot at the outset of each round in the auction.

A lot which is uncontested through several rounds may become contested because, as the auction proceeds, a bidder can shift its bids, for example, from a contested lot to an uncontested lot. If a bidder submits the only bid on a particular lot, the standing price for that lot remains unchanged through subsequent rounds until an additional bid is submitted on that lot at the standing bid price, or the auction ends. As soon as an uncontested lot receives more than one bid, it is treated as a contested lot.

If any bidder finds that it has submitted a bid on a contested lot, in the next round that bidder can either:

- Meet the new asking price for this lot;
- Drop its bid for this lot and submit a new bid elsewhere; or
- Drop its bid for this lot and not submit a new bid elsewhere.

The auction ends when no lot has more than one bid at the last-announced asking price set by BOEM. Because any bidder can move a bid from a contested lot to another lot, the auction for any particular lot is not over until bidding has concluded for all lots. The winning bidders are those with active bids in the final round and they are obligated to pay the final round prices for the lots they win.

Bidding in a SACA auction must comply with a set of rules that BOEM will include in the Proposed and Final Sale Notices. For example:

- A bidder may only bid on contiguous lots to form a single lease.
- Bidders who want to acquire multiple lease areas must register for the auction as separate bidding entities.
- Bidders may maintain or reduce the number of lots they bid on from one round to the next; but they may not increase the number of lots they bid on from one round to the next. This helps to control certain opportunities for gaming, and drives the auction towards a timely conclusion.
- A "bid eligibility rule" would determine the maximum number of lots that a bidder is eligible to bid on in the auction in the opening round, or in any subsequent round of the auction. Bidders' eligibility is based on the amount of money posted as their bid deposit. The maximum number of lots that a bidder may bid on equals the maximum number of lots that would be covered by the bidder's deposit at the opening bid price.
- Bidders may submit an exit bid amount for a particular set of lots in any round. An exit bid can only win if the auction ends in that round, and there is no higher bid on any of the lots in the set. If any of these conditions is not met, the bid is set aside and the bidder exits the auction.

The SACA format provides an opportunity for price discovery like the ascending clock auction format used to bid on a single item. Also, the SACA format permits a bidder to identify combinations of lots which support its particular plan for a commercial offshore wind energy project. Refer to Section 5 in Ausubel and Cramton (2011a) for further discussion of clock auctions and Section 5.3.5 in Ausubel and Cramton (2011c) (Alternative I) for an example of how they work.

One potential problem with the SACA format arises when multiple bidders who have submitted bids on the same lots simultaneously drop out of the auction. In this situation, designing and implementing tiebreaking rules becomes complex. Under the sample rules described above, because bidders may not increase the number of lots on which they bid from one round to the next, large and potentially high-value areas in the auction area may go unclaimed (hereinafter, "undersell"). The difficulty of designing effective exit bidding rules for multiple lot auctions limits their potential effectiveness in

addressing undersell. As a result, it may be a challenge to fully achieve program goals such as optimal configuration of the winning sets of packages and ensuring receipt of fair value with the SACA format.

Alternative for Multiple Lot Auctions: Package Auctions

Several variations of the package auction format merit consideration for leasing packages of lots for offshore development of electricity from wind resources. Below are brief outlines of three such package auction variants. More detailed descriptions of these auction formats are available on BOEM's web site. A "package" is the arrangement of lots that a given bidder has selected in a given round of bidding paired with the price the bidder is willing to pay in that round for that arrangement of lots.

- One variant is a single-phase package clock auction where the bidding would proceed just like a SACA. However, BOEM could select the best arrangement of packages from earlier rounds of the auction to maximize seller revenue, perhaps subject to the condition that the prevailing bids in the final round are included in the winning set of lots. If the SACA phase of bidding resulted in a significant undersell, BOEM could revive early round bids to "fill in" undersold areas.
- A second variant builds on the first variation, but allows bidders to add a number of additional package bids at the conclusion of the SACA phase through a supplemental round of sealed bidding. BOEM would then consider all bid configurations from all the SACA rounds and the supplemental round in determining the winning set of lots based on revenue maximization. Note that any time BOEM proposes a sealed bidding round, we would consider using a "Second Price Rule," in which the winning bidder would only be required to pay the amount bid by the next highest bidder. This prevents a winning bidder from paying more than would have been necessary to win. The Second Price Rule can also benefit the government by discouraging "bid shading." This happens when a bidder bids the amount the bidder thinks will win instead of the amount the bidder thinks the lot is worth, in order to avoid overpaying.
- A third variant would use a non-clock ascending package auction format. In this format, bidders would select packages and also name the price they would pay for those packages. In contrast to the clock formats, bidders would submit a price at or above the minimum required bid increment for their desired package in each round, and the set of packages with the greatest auction revenue would become provisional winners at the end of each round. The auction would end when none of the bids change from one round to the next. BOEM would examine all the packages submitted and select the packages that maximize revenue.

For each of the auction formats listed above, BOEM would need to determine what information is given to bidders at the outset of each round of the auction. For example, bidders could be informed of the number of bids for each lot submitted in the previous round. Bidders in a clock auction (variations 1 and 2) would also be informed of the announced price for each lot, while bidders in a non-clock auction (variation 3) would be informed of the aggregate dollar amount of active high bids.

Theoretical work, including the contract study mentioned earlier, indicates that a package clock auction with a supplemental bidding round is the most effective method for improving auction efficiency. However, BOEM is concerned about designing and using this approach in initial sales, given its reliance on complex bidding rules and solution algorithms, in conjunction with the need to prepare and publish these complicated bidding rules in a transparent manner.

Expanded details on both the clock and non-clock options under consideration are available on BOEM's web site, and we encourage comments on the more complicated package auction alternatives and their appropriateness in early auctions. Refer to Section 6 in Ausubel and Cramton (2011a) for an overview of clock auctions and Section 5.3 in Ausubel and Cramton (2011c) for a comparison of the package clock approaches with examples and further explanation of the rules.

Multiple Factor Auctions

The auction formats described above in this notice are considered sufficient to meet the agency's needs in a wide variety of contexts. However, in certain limited circumstances, BOEM may determine that other factors, along with cash bids, should be considered in determining how it issues leases and, indirectly, how much winning bidders should pay. For example, as BOEM noted in publishing its regulations in 2009:

> [D]uring the time that [BOEM] has been promulgating this rule, the States of Delaware, New Jersey, and Rhode Island have conducted competitive processes and have selected companies to develop wind resources on the OCS. We believe that the pre-existing State processes are relevant to the competitive processes that [BOEM] is required to conduct following approval of this rule. We intend to do so by using a competitive process that considers, among other things, whether a prospective lessee has a power purchase agreement or is the certified winner of a competitive process conducted by an adjacent State.

74 FR 19,663 (Apr. 29, 2009). Therefore, in certain circumstances, BOEM will consider holding "Multiple Factor Auctions," in which non-financial considerations are taken into account at the outset.

If BOEM decides to employ such an auction format, it proposes to do so in a two-phase auction: A non-monetary phase, followed by a second phase using one of the standard auction formats described above. Prior to the auction, BOEM would announce the non-monetary factors to be considered, and the value assigned to each factor. To ensure a fair and transparent process and to ease the task of implementing the auction, BOEM would use a limited number of objective, "yes-no" factors. Examples of such factors could include:

- Do you currently hold a firm financial commitment for the sale of at least 100 MW of power from a proposed offshore wind development in the lease sale area in the form of either a firm purchase power agreement (PPA) that has been approved by the state utility commission or its equivalent OR an ocean renewable energy credit approved by the appropriate state agency?
- Have you completed installation of a meteorological measurement tower on a BOEM limited lease located within the lease sale area?

Each factor would be assigned a percent discount to be applied against the amount that winning bidders would be required to pay BOEM following the auction. Between the non-monetary phase and the monetary phase, each bidder would be informed of the total discount for which it qualifies. To encourage competition and balance non-financial and financial bidding factors in the auction, BOEM is not likely to offer a bidder a discount of more than 25 percent on the basis of non-monetary factors. Refer to Ausubel and Cramton (2011b) and Sections 3 and 4 in Ausubel and Cramton (2011c) for further evaluation of multiple-factor approaches.

Comments and Responses Requested

BOEM is requesting that the public and any interested or affected parties provide specific and detailed comments regarding the auction format

recommendations described herein and in the supporting materials. In addition, BOEM is providing the following list of questions to which it is seeking substantive responses, including rationales and explanations for the answers provided.

1. How should we configure and size auction lots? Should lots generally correspond to an OCS block? What characteristics should BOEM take into account when sub-dividing a wind energy area into lots represented by OCS blocks or by OCS blocks grouped into zones or project areas? Refer to Sections 6.1.1 and 7.1 in Ausubel and Cramton (2011c) for discussions of lot designation.

2. Should the lots auctioned to a single bidder consist of contiguous OCS blocks? Refer to Section 6.2.9 in Ausubel and Cramton (2011c) for a discussion of the contiguous lots rule.

3. Should each bidding entity be limited to bidding on a single contiguous set of blocks?

4. What restrictions should be placed on bidders seeking more than one package of lots during an auction?

5. What factors contribute to the size of an area needed to support an economically viable offshore wind energy facility? Should there be an established rule-of-thumb used to determine the minimum and maximum number of OCS blocks needed? Refer to Section 4.4 in Ausubel and Cramton (2011c) for a discussion of competition constraints.

6. At what asking price per block or per acre should BOEM commence the auction? In other words, what is an appropriate minimum bid per block? At what minimum asking price would you consider not participating in the auction? Refer to Section 6.2.6 in Ausubel and Cramton (2011c) for a discussion of reserve pricing.

7. Which of the auction formats discussed and referenced in this notice do you prefer BOEM use? Does your answer differ by location? Which features of the auction formats would you like to see modified or eliminated?

8. Do the concerns associated with a SACA format (*e.g.*, undersell) justify the added complexity of a package auction? Refer to Section 5.3 in Ausubel and Cramton (2011c) for an example of how undersell occurs.

9. BOEM is considering using a "second-pricing rule" in certain specific contexts, including any auction that includes a sealed-bid phase. How important is it to you that the auction format includes such a second-pricing rule? Would you offer your maximum value as a bid for all lots of interest under a second-price auction formulation? Refer to Section 5.3.11 in Ausubel and Cramton (2011c) for a discussion of winning price determination.

10. What aspects of the auction formats discussed in this note concern you the most? Which features would you like to see retained in practice?

11. What additional factors should BOEM consider in a multiple factor auction beyond those enumerated in this Information Request? How should all of these factors be weighted? Refer to Section 4.1.3 in Ausubel and Cramton (2011b) and Section 3.2 in Ausubel and Cramton (2011c) for a discussion of factor design and weighting.

12. Should lots in desirable locations be weighted differently than those of equal size in less desirable locations? Would this potentially affect your level of activity during the auction? For example, BOEM could adjust rules such that a bidder could expand the number of lots bid on if those lots are in an area that BOEM had determined is less desirable. This is described further in the materials available on BOEM's Web site. Refer to Sections 5.3.8 and 6.2.7 in Ausubel and Cramton (2011c) for discussion of such rules.

13. Are there auction formats not included in this Information Request that BOEM should consider?

Please provide responses to the above questions, and/or any comments or suggestions on the auction formats and activity rules discussed in this Information Request and referenced in the material at BOEM's Web site at *http://www.boem.gov/Renewable-Energy-Program/Regulatory-Information/Renewable-Energy-Auction-Formats.aspx*.

References

Ausubel, Lawrence M. and Peter Cramton (2011a) "Auction Design for Wind Rights," Report to Bureau of Ocean Energy Management.

Ausubel, Lawrence M. and Peter Cramton (2011b) "Multiple-Factor Auction Design for Wind Rights," Report to Bureau of Ocean Energy Management.

Ausubel, Lawrence M. and Peter Cramton (2011c) "Comparision of Auction Formats for Auctioning Wind Rights," Report to Bureau of Ocean Energy Management.

Dated: November 28, 2011.

Tommy P. Beaudreau,

Director, Bureau of Ocean Energy Management.

[FR Doc. 2011–31222 Filed 12–1–11; 4:15 pm]

BILLING CODE 4310–MR–P

DEPARTMENT OF THE INTERIOR

U.S. Geological Survey

[USGS–GX12RN000DSA200]

Agency Information Collection Activities: Comment Request

AGENCY: U.S. Geological Survey (USGS), Interior.

ACTION: Notice of an extension of an information collection (1028–0048).

SUMMARY: We (the U.S. Geological Survey) will ask the Office of Management and Budget (OMB) to approve the information collection (IC) described below. As required by the Paperwork Reduction Act (PRA) of 1995, and as part of our continuing efforts to reduce paperwork and respondent burden, we invite the general public and other Federal agencies to take this opportunity to comment on this IC. This IC is scheduled to expire on March 31, 2012.

DATES: You must submit comments on or before February 6, 2012.

ADDRESSES: Please submit a copy of your comments to the Information Collections Clearance Officer, U.S. Geological Survey, 12201 Sunrise Valley Drive MS 807, Reston, VA 20192 (mail); (703) 648–7199 (fax); or *smbaloch@usgs.gov* (email). Use Information Collection Number 1028–0048 in the subject line.

FOR FURTHER INFORMATION CONTACT: To request additional information about this IC, contact Jim Dewey at (303) 274–8419.

SUPPLEMENTARY INFORMATION:

I. Abstract

The U.S. Geological Survey is required to collect, evaluate, publish and distribute publish information concerning earthquakes. Respondents will have an opportunity to voluntarily supply information concerning the effects of shaking from an earthquake—on themselves, buildings, other man-made structures, and ground effects such as faulting or landslides.

We will protect information from respondents considered proprietary under the Freedom of Information Act (5 U.S.C. 552) and implementing regulations (43 CFR part 2), and under regulations at 30 CFR 250.197, "Data and information to be made available to the public or for limited inspection." Responses are voluntary. No questions of a "sensitive" nature are asked. We will release data collected on these forms only in formats that do not include proprietary information volunteered by respondents.

Washington Building, 8th Floor
1100 Bank Street
Richmond, Virginia 23219-3638
(804) 692-3200 FAX (804) 692-3237
http://www.dmme.virginia.gov/DE/vowda.shtml

January 18, 2012

Greg Adams
BOEM Economics Division
Bureau of Ocean Energy Management
381 Elden Street, MS 4050
Herndon, Virginia 20170-4817

Re: Comments on Offshore Wind Auction Format Information Request

Dear Mr. Adams:

On behalf of the Virginia Offshore Wind Development Authority (VOWDA), an agency established under Virginia law to promote the rational development of offshore wind farms, we are writing to support the inclusion of the Multi-Factor Auction Design in any final regulation establishing auction formats. We also wish to bring to your attention that each State along the Atlantic Seaboard possesses unique laws and regulations and recommend that these be acknowledged in any final auction design.

VOWDA commends the work that BOEM is doing to promote offshore wind and to create a level playing field for developers and interested parties and commends your recognition of these subjective but important factors when awarding leases to developers.

Thank you for your attention to our comments.

Sincerely yours,

Arthur W. Moye
Chairman

c: Cathie J. France, Department of Mines, Minerals and Energy

DIVISIONS
ENERGY
GAS AND OIL
GEOLOGY AND MINERAL RESOURCES
MINED LAND RECLAMATION
MINERAL MINING
MINES
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January 19, 2012

Greg Adams
BOEM Economics Division
Bureau of Ocean Energy Management
381 Elden Street, MS 4050
Herndon, Virginia 20170-4817

Re: Comments on Offshore Wind Auction Format Information Request

Dear Mr. Adams:

The Virginia Department of Mines, Minerals and Energy (DMME) appreciates this opportunity to comment on the subject Federal Register Notice and would like to offer comments on two aspects: (A) advantages of a single-lot auction format; and (B) the design of multiple factor auction criteria.

(A) Advantages of a Single-Lot Auction Format

In introducing the section titled "**Multiple Lot Auctions: Simultaneous Ascending Clock Auction Format**," the Federal Register Notice states: "In most lease sales, BOEM expects to issue multiple commercial renewable energy leases in the same auction." While multiple lot auctions could be appropriate for a large, irregularly shaped Wind Energy Area (WEA) as exists off New Jersey, it could have major disadvantages for the other smaller WEAs, such as exist off Delaware, Maryland, and Virginia.

A single lot auction format, if the lease term is long enough, could enable a single development team to learn from one phase to the next, and thereby reduce the capital cost and cost of energy as the WEA is built out. In a multiple lot format, there would be less opportunity for learning, as each development team would follow its own independent project development path in parallel with the other teams.

In order to permit single-lot phased development, a commercial lease term longer than 25 years would be required, and DMME understands that the rule provides BOEM with the flexibility of entering into a longer term lease. The anticipated Virginia Call area, for example, has a total potential installed capacity of 2,000 to 2,400 MW and thus could be developed in four successive phases of 500 to 600 MW each. With a 5-year development period and 25-year service life for each phase, single-lot phased development would require a 45-year commercial lease.

Phased development of a single, large lease could ensure a steady market demand for turbines, foundation support structures, and array cables. This would have a greater chance of attracting capital investment in a domestic supply chain for these components, whereas multiple leases would almost ensure that these components must be imported, as no individual lease would be large enough to support a new manufacturing facility.

Together with the learning benefits of a single development team building each phase, the attraction of a domestic supply chain would have a large impact on reducing the cost of offshore wind energy. The high cost of offshore wind energy remains a market barrier, and we encourage BOEM to allow a single-lot format that could lower these costs.

Phased development of a single, large lease also could have a more stable effect on the regional economy and the least environmental impact in terms of port facility utilization and associated environmental impacts. Multiple leases could have a "boom, then bust" effect as multiple port staging areas are ramped up for different projects and then shut down after those project are built.

(B) Design of Multiple Factor Auction Criteria

In addition to recommending a Single Lot auction for the Virginia offshore Wind Energy Area, we also recommend that BOEM implement this auction in a two-phase "Multiple Factor Auction" approach, as described in the Federal Register Notice. The first phase would be non-monetary, whereby a bidder would receive a percent discount based on one or more "yes-no" factors that reflect on a developer's already invested interest to develop an awarded lease.

The Federal Register Notice lists two examples of such factors about which a bidder could be asked for a "yes-no" response that can be transparently documented:

(1) Do you hold a firm financial commitment, such as a power purchase agreement (PPA) or state-approved renewable energy credit for at least 100 MW from a proposed project in the Wind Energy Area?

(2) Have you completed installation of a met tower in a BOEM limited lease located within the Wind Energy Area?

Neither of the above examples would apply to Virginia. Regarding example factor (1), a PPA usually is between a private developer and a utility, so this factor could not be applied by a regulated utility such as Dominion Virginia Power, or a membership cooperative such as Old Dominion Electric Cooperative, who would have the state-regulated authority to own an offshore wind project that would provide power to customers in their service territories.

Regarding example factor (2), BOEM did not offer any limited leases off Virginia under its interim policy; only Delaware and New Jersey have active interim-policy leases. An analogous criterion that would be specific to Virginia could be awarding a bidder a percent discount that would be proportional to its previous funding contribution towards installation and operation of new-build met towers on Virginia's research lease aliquots along the northern and southern edges of the commercial lease area.

DMME requests that BOEM work closely with its Virginia Intergovernmental Task Force in developing and refining criteria by which multiple factor discount percentage points would be awarded in the initial, multiple factor phase of a two-phase auction process for the Virginia Call area.

DMME commends the work that BOEM is doing to promote offshore wind by efficiently allocating renewable energy leases and your recognition and accommodation of factors that vary in importance by state as you design the process to award leases to developers.

Thank you for your attention to our comments.

Sincerely,

Conrad T. Spangler, III
Director

APPENDIX E

COMMERCIAL RENEWABLE ENERGY TRANSMISSION ON THE OUTER CONTINENTAL SHELF (OCS) OFFSHORE MID-ATLANTIC STATES – NOTICE OF PROPOSED GRANT AREA AND REQUEST FOR COMPETITIVE INTEREST (RFCI) IN THE AREA OF THE ATLANTIC WIND CONNECTION PROPOSAL

- FEDERAL REGISTER NOTICE (12/21/12)
- VOWDA COMMENT LETTER (2/15/12)
- ATLANTIC WIND CONNECTION LETTER TO VOWDA (2/15/12)

Interior, Office of the Secretary, Office of Wildland Fire, Attention: Shari Eckhoff, 300 E. Mallard Drive, Suite 170, Boise, Idaho 83706–6648. WFEC requests that written comments be received by the Friday preceding the scheduled meeting. Attendance is open to the public, but limited space is available. Persons with a disability requiring special services, such as an interpreter for the hearing impaired, should contact Ms. Eckhoff at (202) 527–0133 at least seven calendar days prior to the meeting.

Dated: December 8, 2011.

Roy Johnson,

Designated Federal Officer.

[FR Doc. 2011–32695 Filed 12–20–11; 8:45 am]

BILLING CODE 4310–J4–P

DEPARTMENT OF THE INTERIOR

Bureau of Ocean Energy Management

[Docket No. BOEM–2011–0023]

Commercial Renewable Energy Transmission on the Outer Continental Shelf (OCS) Offshore Mid-Atlantic States, Notice of Proposed Grant Area and Request for Competitive Interest (RFCI) in the Area of the Atlantic Wind Connection Proposal

AGENCY: Bureau of Ocean Energy Management, Department of the Interior.

ACTION: Provide Public Notice of an Unsolicited Application for a Transmission Right-of-Way Grant Supporting Renewable Energy, Request for Submission of Indications of Competitive Interest, and Request for Public Comment.

SUMMARY: The purpose of this public notice is to: (1) Describe the Atlantic Wind Connection proposal submitted to BOEM; (2) solicit public input regarding the proposal, its potential environmental consequences, and the use of the area in which the proposal would be located; and (3) solicit submissions of indications of competitive interest for a right-of-way (ROW) grant for renewable energy purposes for the area identified in this notice.

On March 31, 2011, BOEM received an application from Atlantic Grid Holdings LLC (AGH) for a ROW grant on the OCS offshore New York, New Jersey, Delaware, Maryland, and Virginia. AGH's proposed project, Atlantic Wind Connection (AWC), would entail the construction and installation of a two-circuit, high-voltage direct current (HVDC) transmission line that would collect power generated by wind power generation facilities on the OCS and deliver it to the grid operated by PJM Interconnection LLC (PJM) and possibly also the New York Independent System Operator, LLC (NYISO). When the wind power generation facilities are not functioning at full capacity, the AWC facilities would facilitate the transmission of conventionally-generated electricity between points on the onshore grid.

Development of each phase would not be open-ended. Any ROW grant or plan approval contemplated by this notice would contain requirements that development under the grant take place within prescribed timeframes, as described in the grant, pursuant to 30 CFR 585.652(b). If AGH were to fail to meet such timeframes, BOEM may reduce the size of, terminate, or cancel the grant pursuant to 30 CFR 585.432–.437, or the terms of the grant itself. The application requests only a ROW grant—it does not request a lease for commercial wind generation.

This announcement invites the submission of indications of competitive interest for a ROW grant for the area requested by AGH to construct transmission facilities. BOEM will consider the responses to this public notice to determine whether competitive interest exists for the area requested by AGH, as required by 43 U.S.C. 1337(p)(3). Parties wishing to obtain a ROW grant for the area requested by AGH should submit detailed and specific information as described in the section entitled, "Required Nomination Information."

This announcement also requests that interested and affected parties comment and provide information about site conditions and multiple uses within the area identified in this notice that would be relevant to the proposed project or its impacts. The information that BOEM is requesting is described below in the section entitled, "Requested Information from Interested or Affected Parties."

This notice is published pursuant to subsection 8(p) of the OCS Lands Act, which was added through the enactment of Section 388 of the Energy Policy Act of 2005 (EPAct) (43 U.S.C. 1337(p)(3)), as well as the implementing regulations at 30 CFR Part 585.

DATES: If you are submitting an indication of interest in acquiring a ROW grant for the area requested by AGH, your submission must be sent by mail, postmarked no later than February 21, 2012 for your submission to be considered. If you are providing comments or other submissions of information, you may send them by mail, postmarked by this same date, or you may submit them through the Federal Rulemaking Portal at *http://www.regulations.gov*, also by this same date.

Submission Procedures: This notice solicits: (1) Submission of competitive interest in obtaining a ROW grant for renewable energy purposes for the area identified in this notice; and (2) public input related to the proposal, its potential environmental consequences, and the use of the area in which the proposal would be located. If you are submitting an indication of competitive interest for a ROW grant, please submit your nomination by mail to the following address: Bureau of Ocean Energy Management, Office of Renewable Energy Programs, 381 Elden Street, HM 1328, Herndon, Virginia 20170. Submissions must be postmarked by February 21, 2012 to be considered by BOEM for the purposes of determining competitive interest. BOEM will list the parties that submit indications of competitive interest in the area requested by AWC, and describe the types of facilities proposed for the ROW, on the BOEM Web site after the 60-day comment period has closed.

If you wish to protect the confidentiality of your nominations or comments, clearly mark the relevant sections and request that BOEM treat them as confidential. Please label privileged or confidential information "Contains Confidential Information" and consider submitting such information as a separate attachment. Treatment of confidential information is addressed in the section of this notice entitled, "Privileged or Confidential Information." BOEM will post all comments on regulations.gov unless labeled as confidential. Information that is not labeled as privileged or confidential will be regarded by BOEM as suitable for public release.

Comments and other submissions of information should be submitted as follows:

1. Comments may be submitted through the Federal eRulemaking Portal: *http://www.regulations.gov*. In the entry titled "Enter Keyword or ID," enter BOEM–2011–0023, and then click "search." Follow the instructions to submit public comments and view supporting and related materials available for this notice.

2. Alternatively, comments may be submitted by mail to the following address: Bureau of Ocean Energy Management, Office of Renewable Energy Programs, 381 Elden Street, HM 1328, Herndon, Virginia 20170.

FOR FURTHER INFORMATION CONTACT: Mr. Wright Frank, Energy Program Specialist, BOEM, Office of Renewable Energy Programs, 381 Elden Street, HM 1328, Herndon, Virginia 20170, (703) 787–1325.

SUPPLEMENTARY INFORMATION:

Purpose of the RFCI

The OCS Lands Act requires BOEM to award leases, easements, and ROWs competitively, unless after public notice, BOEM determines there is no competitive interest (43 U.S.C. 1337(p)(3)). Responses to this public notice will allow BOEM to determine, pursuant to 30 CFR 585.306, whether or not there is competitive interest in acquiring the ROW area requested by AGH for the construction and installation of cables and associated facilities for the transmission of electricity from renewable energy projects. In addition, this notice provides an opportunity for interested stakeholders to comment on the AGH proposal, and any potential impacts the AWC project may have.

If, in response to this notice, BOEM receives one or more indications of competitive interest for offshore transmission development from qualified entities that compete with the proposed AWC ROW, it may decide to move forward with the ROW grant issuance process using competitive procedures pursuant to 30 CFR Part 585. However, if BOEM receives no competing nominations, BOEM may decide to move forward with the ROW grant issuance process using the non-competitive procedures contained in 30 CFR Part 585.

Should BOEM decide to issue a grant in the area, whether competitively or non-competitively, it will provide the public with additional opportunities to provide input pursuant to 30 CFR Part 585 and applicable law, such as the National Environmental Policy Act (NEPA).

Background

Energy Policy Act of 2005 (EPAct)

The EPAct amended the OCS Lands Act by adding subsection 8(p), which authorizes the Secretary of the Interior to grant leases, easements, and ROWs on the OCS for activities that are not otherwise authorized by law and that produce or support production, transportation, or transmission of energy from sources other than oil or gas. The EPAct also required the issuance of regulations to carry out the new authority pertaining to renewable energy on the OCS. The Secretary delegated this authority to issue leases, easements, and ROWs, and to promulgate regulations, to the Director of BOEM. On April 29, 2009, BOEM promulgated renewable energy regulations, at 30 CFR Part 585, which can be found at: *http://www.boem.gov/uploadedFiles/FinalRenewableEnergyRule.pdf.*

Executive Order 13547: Stewardship of the Ocean, Our Coasts, and the Great Lakes

In July 2010, the President signed an Executive Order (EO) establishing the National Ocean Council. The EO establishes a comprehensive, integrated national policy for the stewardship of the oceans, our coasts and the Great Lakes. Where BOEM actions affect the ocean, the EO requires BOEM to take such action as necessary to implement this policy, the stewardship principles and national priority objectives adopted by the EO, and guidance from the National Ocean Council.

BOEM appreciates the importance of coordinating its planning endeavors with other OCS users and regulators and intends to follow principles of coastal and marine spatial planning, and coordinate with the regional planning bodies as established by the National Ocean Council to inform its leasing processes. BOEM anticipates that continued coordination with the BOEM State Renewable Energy Task Forces will help inform comprehensive coastal and marine spatial planning efforts.

BOEM State Renewable Energy Intergovernmental Task Forces

BOEM has formed Renewable Energy Intergovernmental Task Forces to enhance coordination among relevant Federal agencies and potentially affected state, local and tribal governments throughout the leasing and grant issuance processes. On June 1, 2011, BOEM held a teleconference and Web conference with the New York, New Jersey, Delaware, Maryland, and Virginia Task Forces to discuss (1) the AWC proposal, (2) a draft of this **Federal Register** notice, and (3) the process that BOEM would use to process AGH's application. BOEM will continue to coordinate with these Task Forces as necessary and appropriate throughout the leasing and grant issuance process.

Determination of Competitive Interest

The first step in determining whether there is competitive interest under 30 CFR 585.307 will be the evaluation of indications of competitive interest for the ROW grant area requested by AGH to install cables and associated facilities for the transmission of electricity. At the conclusion of the comment period for this public notice, BOEM will review the submissions received, undertake a completeness review and qualifications review, and make a determination as to whether competitive interest exists.

Under BOEM's regulations at 30 CFR 585.302(b)(1), the rights accorded in a ROW grant do not prevent the issuance of other rights in the same area, provided that any subsequent ROW grant issued by BOEM in the area of a previously-issued ROW grant does not unreasonably interfere with activities approved under the previously-issued ROW grant. BOEM may find that competitive interest exists if it receives a proposal to acquire an OCS ROW grant that matches the proposed grant area.

In the event that BOEM determines that competitive interest exists, BOEM may decide to follow the process described in subpart B of BOEM's regulations at 30 CFR 585.220–.225 for the competitive issuance of leases.

If, after evaluating the responses to this notice, BOEM determines that there is no competitive interest in the proposed grant area, it may decide to proceed with the noncompetitive grant issuance process pursuant to 30 CFR 585.306(b), consulting with the applicable BOEM State Task Forces. BOEM would announce its finding in a **Federal Register** notice. Following that notice, BOEM would initiate National Historic Preservation Act (NHPA) Section 106 and Government-to-Government consultations. After BOEM has issued a Determination of No Competitive Interest, the applicant would be required to submit a General Activities Plan (GAP), as described in 30 CFR 585.306(b). Following the submission of a GAP, BOEM would initiate the National Environmental Policy Act (NEPA) process.

Whether following competitive or non-competitive procedures, BOEM will comply with the requirements of the NEPA, the Coastal Zone Management Act (CZMA), the Endangered Species Act (ESA), the NHPA, the Rivers and Harbors Act, the Clean Water Act, and other applicable Federal statutes prior to making a decision on whether or not to issue a grant and/or GAP approval, disapproval, or approval with modifications. In territorial waters, applicants will be responsible for compliance with additional Federal and state requirements. BOEM would coordinate and consult, as appropriate, with relevant Federal agencies, affected tribes, and affected state and local governments, in issuing a grant and developing grant terms and conditions.

Description of the Proposal

AGH proposes to build an offshore "backbone" electrical transmission system that would enable up to 7,000 megawatts (MW) of offshore wind turbine capacity to be delivered to the regional high-voltage grid controlled by PJM Interconnection, LLC. AGH is considering several project design options, one of which would also entail interconnection into the NYISO. The transmission system would be constructed on the OCS off the coasts of New York, New Jersey, Delaware, Maryland, and Virginia. When wind power generation is not functioning at full capacity, AGH proposes that the AWC facilities would transmit conventionally-generated electricity between points on the onshore grid.

The AWC project is proposed as a single integrated system, although it would be constructed in five phases. It is anticipated that, if fully developed, the ROW grant corridor would extend approximately 820 statute miles. Full construction would take approximately 10 years. The phases of the proposed development are described below:

- Phase A: The offshore facilities from southern New Jersey to Delaware with a capacity of up to 2,000 megawatts (MW) (about 80 statute miles);
- Phase B: The offshore facilities from southern New Jersey to the northern New Jersey/New York metropolitan area with a capacity of up to 1,000 MW (about 110 statute miles);
- Phase C: The offshore facilities from Maryland to the northern New Jersey/New York metropolitan area with a capacity of up to 2,000 MW (about 290 statute miles);
- Phase D: The offshore facilities from Maryland to Virginia with a capacity of up to 1,000 MW (about 175 statute miles); and
- Phase E: The offshore facilities from Delaware to Virginia with a capacity of up to 1,000 MW (about 165 statute miles).

The phases of the AWC system are intended to align with what AGH anticipates to be the timing of offshore wind generation development. The AWC project does not include any proposals for offshore wind energy generation facilities.

The proposal includes two fully-built circuits (Circuit 1 and Circuit 2), each installed within a separate offshore corridor. The corridors are separated to lessen the risk that a single event, such as an anchor drag, could damage both circuits. From the northernmost point of the proposal to Virginia, circuit 1 would be installed closer to shore—generally between 4 and 15 statute miles offshore—than circuit 2. However, circuit 1 would cross Circuit 2 offshore Virginia and would lie further offshore than circuit 2 at the southernmost part of the route. Circuit 2 would be installed further offshore than circuit 1, in the 6 to 20 statute mile range from northern New Jersey to the crossing of the circuits offshore Virginia. AGH is requesting a ROW grant that would also allow for another possible path in which Circuits 1 and 2 would not cross offshore Virginia, remaining parallel throughout the route (See map referenced in "Map of the Area" section, below).

In addition to the cable, AGH anticipates that the AWC system would have up to nine offshore converter platforms, which would receive electricity via cable from offshore renewable energy generation facilities. These platforms would convert high-voltage alternating current into HVDC using voltage sourced converters. Each offshore converter platform would connect to one of the two proposed circuits. The circuits would connect to the onshore transmission grid at up to seven locations where AWC terrestrial converter stations would convert the HVDC current to HVAC and connect to the grid. Interconnection is contemplated at Larrabee, New Jersey; Cardiff, New Jersey; Indian River, Delaware; and Piney Grove, Maryland. In Virginia, interconnections are planned at two of the following three potential interconnection points—one in Virginia Beach, and two more at Fentress, Virginia. In the northern New Jersey/New York metropolitan area, interconnection is planned at one of the following three interconnection points: Sewarren, New Jersey; Hudson, New Jersey; and Zone J on Long Island, New York. Each circuit of the project would contain three cables, two 320 kilovolt (kV) cables, and a fiber optic cable to provide communications and control capability. The two circuits together would require a total of four power cables, and two communication cables.

All cables would be buried to a depth that would likely be determined by factors such as the type of seafloor (hard bottom or soft bottom), the potential presence of sandwaves and sediment megaripples, and the marine uses that take place in a given cable area.

Description of the Area

The area under consideration is located on the OCS off the coasts of New York, New Jersey, Delaware, Maryland, and Virginia. A ROW grant is a corridor 200 feet in width centered on the cable or pipeline (30 CFR 585.301). The coordinates of the centerline for the ROW can be downloaded from the following URL: *http://www.boem.gov/Renewable-Energy-Program/State-Activities/Regional-Proposals.aspx.*

The ROW grant area requested by AGH consists of this centerline and an area 100 feet to either side. This area may be adjusted based on the results of future surveys or new information obtained from stakeholder outreach and public input. We request public comments and indications of competitive interest in the actual ROW area requested. The centerline of the ROW can be determined by interconnecting the points indicated by the centerline coordinates. Coordinates are provided in X, Y (eastings, northings) UTM Zone 18N, NAD 83 and geographic (longitude, latitude), NAD83. Coordinates for tentative offshore substation locations are also available from the web site indicated above.

Map of the Area

A map of the area proposed for a ROW grant can be found at the following URL: *http://www.boem.gov/Renewable-Energy-Program/State-Activities/Regional-Proposals.aspx.*

The application itself may also be downloaded from the Web site. A large scale map of the RFCI area showing boundaries of the area is available from BOEM at the following address: Bureau of Ocean Energy Management, Office of Renewable Energy Programs, 381 Elden Street, HM 1328, Herndon, Virginia 20170, Phone: (703) 787–1320, Fax: (703) 787–1708.

Required Nomination Information

If you intend to submit an indication of competitive interest for a ROW grant for the area identified in this notice for the purposes of transmitting electricity from renewable energy facilities to shore, you must provide the following:

(1) Documentation demonstrating that you are legally qualified to hold a ROW grant as set forth in 30 CFR 585.106–.107. Guidance and examples of the documentation appropriate for demonstrating your legal qualifications can be found in Chapter 2 and Appendix B of the BOEM Renewable Energy Framework Guide Book available at: *http://www.boemre.gov/offshore/renewableenergy/PDFs/REnGuidebook_03August2009_3_.pdf.*

Legal qualification documents will be placed in an official file that may be made available for public review. If you wish that some part of your legal qualification documentation be kept confidential, clearly identify what should be kept confidential, and submit it under separate cover (see Protection

of Privileged or Confidential Information Section, below).

(2) Documentation demonstrating that you are technically and financially qualified to hold a lease as set forth in 30 CFR 585.106–107, including documentation demonstrating that you are technically and financially capable of constructing, operating, maintaining, and decommissioning the facilities described in (4), below. Guidance regarding the documentation that you may submit to demonstrate your technical and financial qualifications can be found at: *http://www.boemre.gov/offshore/RenewableEnergy/PDFs/QualificationGuidelines.pdf.*

(3) A statement that you wish to acquire a renewable energy ROW grant for the proposed grant area requested by AGH for the AWC project and a description of how your proposal would interfere with, or suffer interference from, the AWC proposed project. Any request for a ROW grant located outside of the proposed grant area should be submitted separately pursuant to BOEM's regulations at 30 CFR 585.305.

(4) A description of your objectives, including:

- Devices and infrastructure involved (if your project would require the use of offshore platforms, please indicate where those platforms would be located);
- Anticipated capacity;
- How the project would support renewable energy facilities; and
- A statement that the proposed activity conforms with state and local energy planning requirements, initiatives or guidance, as applicable.

(5) A schedule of proposed activities, including those leading to commercial operations; and;

(6) Available and pertinent data and information concerning environmental conditions in the area, including any energy and resource data and information used to evaluate the area. Where applicable, spatial information should be submitted in a format compatible with ArcGIS 9.3 in a geographic coordinate system, (NAD 83).

Your complete nomination, including the items identified in (1) through (6) above, must be provided to BOEM in both paper and electronic formats. BOEM considers an Adobe PDF file stored on a compact disc (CD) to be an acceptable format for submitting an electronic copy.

It is critical that you provide a complete submission of competitive interest so that BOEM may consider your submission in a timely manner. If BOEM reviews your submission and determines that it is incomplete, BOEM will inform you of this determination in writing and describe the information that BOEM wishes you to provide in order for BOEM to deem your submission complete. You will be given 15 business days from the date of the letter to provide the information that BOEM found to be missing from your original submission. If you do not meet this deadline, or if BOEM determines your second submission is also insufficient, BOEM reserves the right to deem your submission invalid. In such a case, BOEM would not consider your submission.

Requested Information From Interested or Affected Parties

BOEM is also requesting from the public and other interested or affected parties specific and detailed comments regarding the following:

(1) Geological and geophysical conditions (including bottom and shallow hazards) in the area described in this notice;

(2) Known archaeological, historic, and/or cultural resource sites on the seabed in the area described in this notice;

(3) Multiple uses of the area described in this notice, including navigation (in particular, commercial and vessel usage, recreation, and commercial and recreational fisheries);

(4) Potential impacts to existing communication cables;

(5) Department of Defense operational, training and testing activities (surface and subsurface) that occur in the area described in this notice that may be impacted by the proposed project;

(6) Impacts to potential future uses of the area;

(7) Advisable setback distance for other offshore structures, including other cables, renewable energy structures, oil and gas structures, etc.

(8) The potential risk posed by anchors or other factors, and burial depths that would be required to mitigate such risks;

(9) Other relevant environmental and socioeconomic information.

Protection of Privileged or Confidential Information

Freedom of Information Act

BOEM will protect privileged or confidential information that you submit as required by the Freedom of Information Act (FOIA). Exemption 4 of FOIA applies to trade secrets and commercial or financial information that you submit that is privileged or confidential. If you wish to protect the confidentiality of such information, clearly mark it and request that BOEM treat it as confidential. BOEM will not disclose such information, subject to the requirements of FOIA. Please label privileged or confidential information, "Contains Confidential Information," and consider submitting such information as a separate attachment.

However, BOEM will not treat as confidential any aggregate summaries of such information or comments not containing such information. Additionally, BOEM will not treat as confidential: (1) The legal title of the nominating entity (for example, the name of your company); or (2) the geographic location of nominated facilities and the types of those facilities. Information that is not labeled as privileged or confidential will be regarded by BOEM as suitable for public release.

National Historic Preservation Act (16 U.S.C. 470w–3(a))

BOEM is required, after consultation with the Secretary, to withhold the location, character, or ownership of historic resources if it determines that disclosure may, among other things, risk harm to the historic resources or impede the use of a traditional religious site by practitioners. Tribal entities should designate information that falls under Section 304 of NHPA, 16 U.S.C. 470w–3, as confidential.

Dated: November 30, 2011.

Tommy P. Beaudreau,

Director, Bureau of Ocean Energy Management.

[FR Doc. 2011–32277 Filed 12–20–11; 8:45 am]

BILLING CODE 4310–MR–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–R8–ES–2011–N226; FXHC–1113–0000–05D]

Proposed Safe Harbor Agreement for the Shasta Crayfish in Cassel, Shasta County, CA

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of availability; receipt of application.

SUMMARY: This notice advises the public that Michael, Melanie, and Paul Kerns (applicant) have applied to the U.S. Fish and Wildlife Service (Service) for an Enhancement of Survival permit under the Endangered Species Act of 1973, as amended (Act). The permit application includes a proposed safe harbor agreement (agreement) between the

Washington Building, 8th Floor
1100 Bank Street
Richmond, Virginia 23219-3638
(804) 692-3200 FAX (804) 692-3237
http://www.dmme.virginia.gov/DE/vowda.shtml

February 15, 2012

Mr. Wright Frank
Bureau of Ocean Energy Management
Office of Renewable Energy Programs
381 Elden Street, HM 1328
Herndon, Virginia 20170

Subject: Commercial Renewable Energy Transmission on the Outer Continental Shelf (OCS) Offshore Mid-Atlantic States, Notice of Proposed Grant Area and Request for Competitive Interest (RFCI) in the Area of the Atlantic Wind Connection Proposal. Docket No. BOEM–2011–0023

Dear Mr. Frank:

The Virginia Offshore Wind Development Authority (VOWDA) is hereby responding to the subject Notice of Proposed Grant Area and Request for Competitive Interest (RFCI), as detailed in the announcement posted in the Federal Register, Vol. 76, No. 245 on December 21, 2011.

As requested by the subject Notice, this letter provides information about site conditions and multiple uses within the area identified by the Notice that are relevant to the proposed project or its impacts.

The subject RFCI also invited the submission of indications of competitive interest for any right-of-way (ROW) grant that may partially or fully overlap the area requested by Atlantic Grid Holdings, LLC (AGH), or that may otherwise interfere with development of AGH's proposed offshore transmission facilities, which are collectively named the Atlantic Wind Connection (AWC).

VOWDA's comments hereunder support the following objectives: (i) reduce the cost of delivering power to Virginia residents from wind farms off the coast of Virginia, (ii) remove barriers and promote actions and policies that shorten the time to permit, design, and construct wind farms offshore of Virginia. Specifically, with respect to the granting of any ROW, VOWDA seeks a solution that will hasten the on-line date for Virginia offshore wind, and at the same time will reduce cost of power from these wind farms to Virginia residents.

AGH has requested lease blocks for three possible cable routes from its proposed Virginia offshore hubs to the Virginia coast. VOWDA understands that at a minimum Dominion Virginia Power (DVP) is evaluating the construction of transmission solutions to connect projects

in the Virginia offshore Wind Energy Area (WEA) to the onshore transmission grid. VOWDA notes that there is a high potential for geographic overlap between the three AWC alternative routes and other potential transmission options to be constructed to connect projects to the onshore grid. At this time, VOWDA does not support one option over the other as it remains to be determined which of the proposed options (or any other options) best support VOWDA's stated objectives.

VOWDA's primary area of concern is the granting of ROW between the Virginia WEA and the Virginia coast. VOWDA's objective is for any ROW between the Virginia WEA and the Virginia coast to be granted to the party that can accelerate the development of low cost offshore wind to Virginia residents.

VOWDA is concerned that the current proposed schedule for placing the Virginia phases of the AWC into service is not until 2019, while offshore wind projects in the Virginia WEA could be operational as early as 2017 and that by awarding AGH a ROW grant between the Virginia WEA and the Virginia coast at this time, BOEM could prevent or delay development of a lower cost near term transmission solution by any other party, or in the alternative, force projects to wait until AWC Phase D is constructed for the first 1,000 MW of installed capacity in the Virginia WEA and wait again until AWC Phase E is constructed for the second 1,000 MW of installed capacity in the Virginia WEA. Neither of these alternatives is in Virginia's best interest, nor are they in the national policy interest of realizing commercial deployment of cost-effective offshore wind generation as quickly as possible.

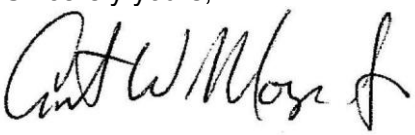
The AWC Phase D and Phase E circuits are not now planned to be operational until AFTER the first Virginia offshore wind projects would need to interconnect. Therefore, VOWDA makes the following requests:

1. That BOEM not award any exclusive ROW grants in such a way that could prevent or delay any other party from pursuing an interconnection route of their choice between the Virginia WEA and the onshore grid, where that interconnection cable may be at a lower cost and/or may accelerate the construction of wind farms offshore Virginia. Specifically, we urge BOEM not to award exclusive legal rights in its ROW grants that would allow a ROW lessee to require compensation for crossing their ROW or withhold permission or delay a crossing of its ROW.
2. That BOEM reserve ROW lease blocks off Virginia to be granted to an applicant or applicants who can demonstrate the ability and intent to install a submarine power cable in time to interconnect the first offshore wind project(s) in the Virginia WEA that would provide for the lowest transmission costs between the Virginia WEA and Virginia residents.

VOWDA commends the work that BOEM is doing to promote the development of shared offshore transmission infrastructure for wind projects in the Mid-Atlantic region, and we appreciate the opportunity to submit these comments for your consideration. We hope that they illustrate the risks in awarding any exclusive ROWs for AWC Phases D and E off Virginia at this time. We urge BOEM to encourage AGH and other parties wanting to implement any offshore shared interconnection for the Virginia WEA to inform the VOWDA Board of their plans and

demonstrate how such plans will meet the interconnection needs of Virginia WEA projects in a timely and cost-effective manner.

Sincerely yours,



Arthur W. Moye
Chairman

c: Cathie J. France, Department of Mines, Minerals and Energy

Atlantic
Wind Connection

February 15, 2012

The Honorable Arthur W. Moye
Chairman
Virginia Offshore Wind Development Authority
Washington Building, 8th Floor
1100 Bank Street
Richmond, Virginia 23219-3638

Re: Virginia and the Atlantic Wind Connection project

Dear Chairman Moye:

Atlantic Grid Holdings LLC respectfully requests the support of the Virginia Offshore Wind Development Authority (VOWDA) for the Atlantic Wind Connection (AWC), our proposed multi-terminal submarine cable network for the mid-Atlantic region. This high-voltage direct-current (HVDC) system will provide advanced technology to connect offshore wind farms along the Atlantic coast to the strongest points of the terrestrial grid, improve offshore wind economics, alleviate the challenge of wind energy intermittency, and reduce the environmental impact of multiple offshore lines.

As you are aware, an unsolicited application for a right-of-way (ROW) grant was submitted to the Bureau of Ocean Energy Management (BOEM) on March 31, 2011 and amended on August 10, 2011. The AWC project includes a connection from the Virginia Wind Energy Area (WEA) to terrestrial points of interconnect (see attached figure; note that this figure reflects the original Virginia WEA). Atlantic Grid Holdings has engaged in an extensive outreach program to solicit the views and concerns of federal and state agencies, local governments, special interest groups, the general public and prospective developers for wind farms and transmission systems. It should also be noted that BOEM recently published a Request for Competitive Interest (RFCI or Notice) in the proposed location of the AWC ROW. This Notice is designed to solicit expressions of interest from competing projects and to find out more about the current uses of the offshore area where the AWC is proposed. The public notice provides a list of specific and extensive detailed information which a potentially competing transmission project *must* submit to support its expression of interest.

We understand that other parties in the state are evaluating whether to develop transmission that would serve offshore wind, and that this is a topic that VOWDA is carefully reviewing. We have discussed our project with Dominion Virginia Power and are aware that it has announced they are conducting a study of transmission facilities needed to serve the Virginia wind energy area (WEA).

We believe that even if VOWDA supports the efforts of Dominion or others to build offshore transmission, that there are good reasons that two cables could be developed in the same general area on the Outer Continental Shelf (OCS). Indeed, VOWDA may prefer that AWC and Dominion both plan

offshore transmission since competition for the best transmission solution, from a technical and cost perspective, will result in the best outcome for Virginia's ratepayers. Developing the transmission solution that lowers the cost of offshore wind will facilitate an offshore wind industry and the economic development from offshore wind that VOWDA pursues.

Further, there is no legal or practical reason that two cables could not be developed. Legally, under BOEM's regulations (30 CFR 585.302(b)), the United States reserves the right to grant other rights in the area of a previously issued ROW grant as long as that subsequent authorization does not unreasonably interfere with the activities approved in the prior award. The ROW grant that AWC seeks would be a mere 200 feet wide and the actual space on the seabed occupied by AWC's submarine cable would be only a fraction of the grant area. Accordingly, we do not anticipate that AWC's ROW grant would unduly restrict activities – such as other submarine transmission projects or wind farm development – on the lease blocks identified in AWC's ROW application. Numerous power and telecommunications cables already co-exist in the submarine environment and coordination between cables that cross is handled via cable-crossing agreements typical to the industry.

Given that Dominion (or another transmission developer) may freely submit an application to BOEM for whatever area it chooses at any time, there is no basis for VOWDA to put a finger on the scale at this time to attempt to restrict the development of the offshore infrastructure in the area by favoring one project developer over another. AWC will be subject to a full review by BOEM, PJM and an assortment of other federal and state regulators and various stakeholders, based on a fully-developed public record. We assume that any project that purports to compete with AWC would need to do the same. VOWDA would promote not only the best outcome for Virginia's ratepayers but also the potential for a robust offshore wind industry by waiting to review the full record of the AWC project and any competing projects.

In addition to the issues of overlapping or competing projects in the area, we understand that VOWDA may be concerned that the AWC project schedule will not meet the needs of Virginia's offshore wind industry. Timing should not be a significant concern. The AWC system is designed to be flexible to respond to the needs of the fledgling offshore wind industry throughout the mid-Atlantic region. Scheduling of the phases of the AWC system can be adjusted to complement progress in various states. For example, increased interest in development of the Virginia WEA may accelerate one of the AWC project phases that would serve the Virginia WEA. A phased project like AWC has the significant advantage of being designed as an integrated system. As phases are built over time they will connect seamlessly into a regional offshore grid that strengthens the reliability of the land-based transmission grid and improves the efficiency of that grid. Virginia benefits substantially from a strong regional transmission grid.

Support for the offshore wind industry is at the heart of VOWDA's mission. At this early stage of the industry's development, it makes sense to keep options open. We encourage VOWDA to weigh in at BOEM with its support for AWC or, at a minimum, to avoid pre-judging the outcome of offshore wind transmission at this time. AWC has met with Dominion on several occasions and offered to collaborate with Dominion on the transmission project. That offer remains open and may, in the end, be a

beneficial way to proceed. We commend VOWDA's efforts to date to develop offshore wind in Virginia and we look forward to working closely with VOWDA in the years ahead to bring the benefits of offshore wind energy and advanced transmission infrastructure to Virginia and its ratepayers.

Sincerely,

R Mitchell

Robert Mitchell
CEO

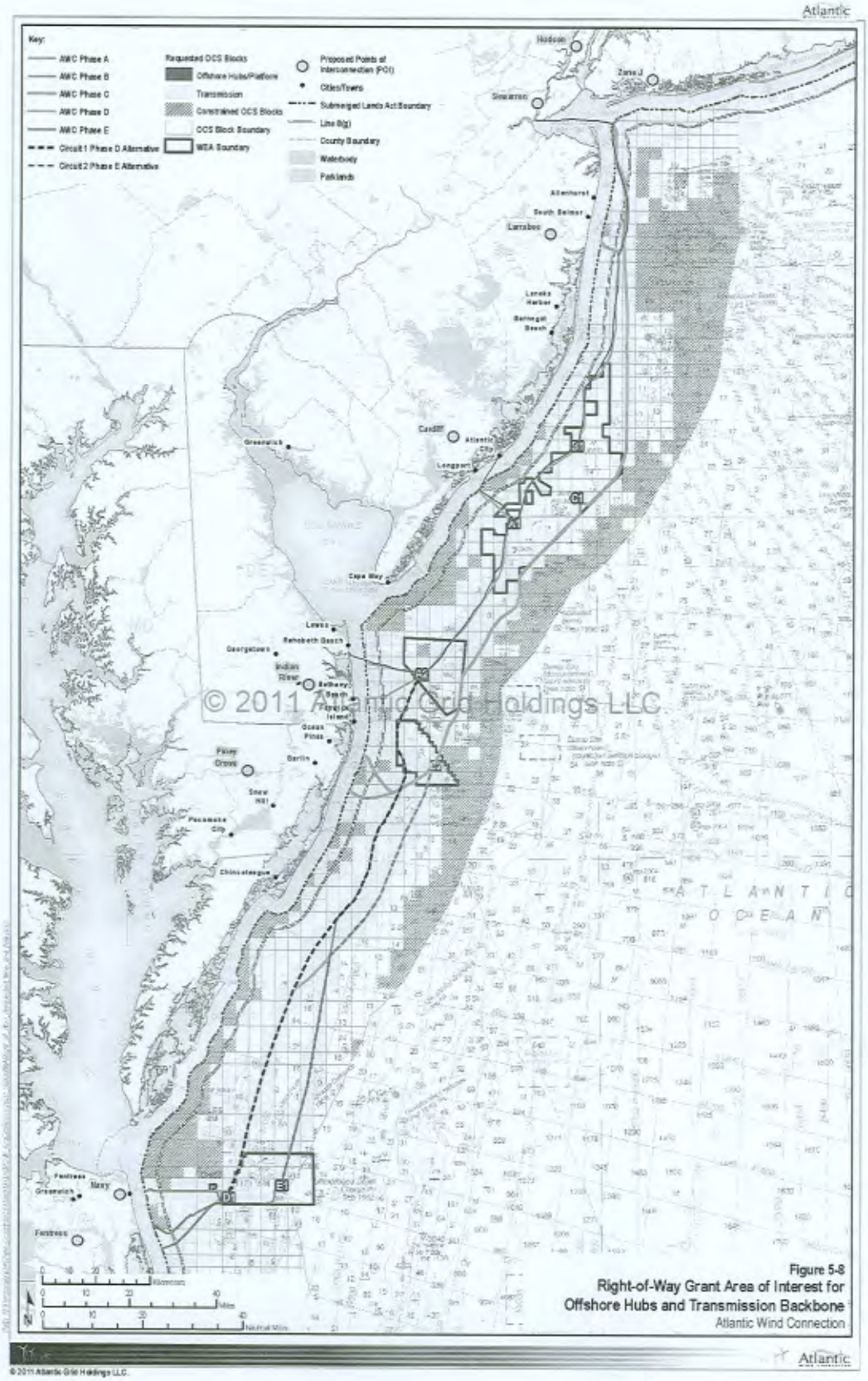


Figure 5-8
Right-of-Way Grant Area of Interest for
Offshore Hubs and Transmission Backbone
Atlantic Wind Connection

APPENDIX F

RIGHT-OF-WAY GRANT OF SUBMERGED LANDS ON THE OUTER CONTINENTAL SHELF TO SUPPORT RENEWABLE ENERGY DEVELOPMENT

- **FEDERAL REGISTER NOTICE (8/29/12)**
- **DMME COMMENT LETTER (9/20/12)**

laws, executive orders, and BLM policies;

2. Existing, valid plan decisions will not be changed and any new plan decisions will not conflict with existing plan decisions; and

3. The plan amendment(s) will recognize valid existing rights.

You may submit comments on issues and planning criteria in writing to the BLM at any public scoping meeting, or you may submit them to the BLM using one of the methods listed in the **ADDRESSES** section above. To be most helpful, you should submit comments by the close of the 30-day scoping period or within 15 days after the last public meeting, whichever is later.

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

The BLM will utilize and coordinate the NEPA public participation requirements to assist the agency in satisfying the public involvement requirements under Section 106 of the National Historic Preservation Act (NHPA) (16 U.S.C. 470(f)) as provided for in 36 CFR 800.2(d)(3). Information about historic and cultural resources within the area potentially affected by the proposed Rio Mesa Project and potential CDCA Plan amendment will assist the BLM in identifying and evaluating impacts to such resources in the context of both NEPA and Section 106 of the NHPA.

The BLM will consult with Indian tribes on a government-to-government basis in accordance with Executive Order 13175 and other policies. Tribal concerns, including impacts on Indian trust assets, will be given due consideration. Federal, State, and local agencies, along with tribes and other stakeholders that may be interested or affected by the proposed action that the BLM is evaluating, are invited to participate in the scoping process and, if eligible, may request or be requested by the BLM to participate in the development of the environmental analysis as a cooperating agency.

The BLM will evaluate identified issues to be addressed in the plan, and will place them into one of three categories:

1. Issues to be resolved in the plan amendment;

2. Issues to be resolved through policy or administrative action; or

3. Issues beyond the scope of this plan amendment.

The BLM will provide an explanation in the EIS as to why an issue was placed in category two or three. The public is also encouraged to identify any management questions and concerns that should be addressed in the plan amendment. The BLM will work collaboratively with interested parties to identify the management decisions that are best suited to local, regional, and national needs and concerns.

The BLM will use an interdisciplinary approach to develop the plan amendment in order to consider the variety of resource issues and concerns identified. Specialists with expertise in the following disciplines will be involved in the planning process: Rangeland management, minerals and geology, outdoor recreation, archaeology, paleontology, wildlife and fisheries, lands and realty, hydrology, soils, and sociology and economics.

Authority: 40 CFR 1501.7 and 43 CFR 1610.2.

Thomas Pogacnik,

Deputy State Director, California.

[FR Doc. 2012–21272 Filed 8–28–12; 8:45 am]

BILLING CODE 4310–40–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[WYW 163447]

Notice of Proposed Withdrawal and Opportunity for Public Meeting; Wyoming; Correction

AGENCY: Bureau of Land Management, Interior.

ACTION: Correction.

SUMMARY: This action corrects the acreage referenced in the **SUMMARY** and **SUPPLEMENTARY INFORMATION** sections of a notice published in the **Federal Register** on Friday, September 1, 2006 (71 FR 52144).

On page 52144, column 1, line 24 of the notice, which reads "approximately 427 acres of public land," is hereby corrected to read, "approximately 504 acres of public land."

On page 52144, column 2, line 20 of the notice, which reads "The area described contains 427 acres," is hereby corrected to read, "The area described contains 504 acres."

Donald A. Simpson,

State Director, Wyoming.

[FR Doc. 2012–21273 Filed 8–28–12; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Bureau of Ocean Energy Management

[BOEM–2011–0082]

Right-of-Way Grant of Submerged Lands on the Outer Continental Shelf to Support Renewable Energy Development

AGENCY: Bureau of Ocean Energy Management (BOEM), Interior.

ACTION: Request for comment.

SUMMARY: BOEM Form 0009 would be used to issue Outer Continental Shelf (OCS) renewable energy right-of-way (ROW) grants in order to streamline this process and increase efficiency and consistency for applicants. As defined by BOEM regulations at 30 CFR Part 585, an ROW grant is an authorization issued for use of a portion of the OCS for the construction and use of a cable or pipeline for the purpose of gathering, transmitting, distributing, or otherwise transporting electricity or other energy product generated or produced from renewable energy, but does not constitute a project easement. The ability of an ROW grantee to install such a cable or pipeline and operate such activities would be subject to the applicable approvals specified in 30 CFR Part 585. BOEM has developed the form included in this notice and invites comments on the draft form. Following the 30-day comment period, BOEM will review all submitted comments, and publish a final version of the form in the **Federal Register**.

DATES: Submit written comments by September 28, 2012.

FOR FURTHER INFORMATION CONTACT: Maureen A. Bornholdt, Program Manager, Office of Renewable Energy Programs at (703) 787–1300.

ADDRESSES: You may submit comments by either of the following methods listed below.

- *Electronically:* go to *http://www.regulations.gov.* In the entry titled "Enter Keyword or ID," enter docket BOEM–2011–0082 then click "search." Follow the instructions to submit public comments and view supporting and related materials. All comments will be posted on *www.regulations.gov.*
- Mail or hand-carry comments to the Department of the Interior; Bureau of Ocean Energy Management; Attention: Jennifer Golladay; 381 Elden Street, HM 1328; Herndon, Virginia 20170. Please reference the docket number and title in your comment and include your name and return address.

Public Comment Procedures: Before including your address, phone number,

email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personally identifiable information—may be made publicly available at any time. While you may ask us in your comment to withhold particular information from public view, we cannot guarantee that we will be able to do so. Information that is not labeled as privileged or confidential will be regarded as suitable for public release.

Authority: 43 U.S.C. 1331 *et seq.*

Dated: August 20, 2012.

Tommy P. Beaudreau,

Director, Bureau of Ocean Energy Management.

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF OCEAN ENERGY MANAGEMENT **RIGHT-OF-WAY GRANT OF SUBMERGED LANDS ON THE OUTER CONTINENTAL SHELF TO SUPPORT RENEWABLE ENERGY DEVELOPMENT** ***Paperwork Reduction Act of 1995 statement:*** *This form does not constitute an information collection as defined by 44 U.S.C. § 3501 et seq, and therefore does not require approval by the Office of Management and Budget.*	Office	Renewable Energy Grant Number
	Cash Bonus	Official Protraction Diagram(s)
	Effective Date	

This right-of-way (ROW) grant, which includes any addenda hereto, is hereby entered into by and between the United States of America, ("Grantor"), acting through the Bureau of Ocean Energy Management ("BOEM"), its authorized officer, and

Grantee	Interest Held

("Grantee"). This grant is effective on the date written above ("Effective Date") and will continue in effect until the grant terminates as set forth in Addendum "B." In consideration of any cash payment heretofore made by the Grantee to the Grantor and in consideration of the promises, terms, conditions, covenants, and stipulations contained herein and attached hereto, the Grantee and Grantor agree as follows:

Section 1: Statutes and Regulations.

This grant is issued pursuant to subsection 8(p) of the Outer Continental Shelf Lands Act ("the Act"); 43 U.S.C. §§ 1331 *et seq*. This grant is subject to the Act and regulations promulgated pursuant to the Act, including but not limited to, offshore renewable energy and alternate use regulations at 30 C.F.R. Part 585 as well as other applicable statutes and regulations in existence on the Effective Date of this grant. This grant is also subject to those statutes enacted (including amendments to the Act and other statutes) and regulations promulgated thereafter, except to the extent that they explicitly conflict with an express provision of this grant. It is expressly understood that amendments to existing statutes and regulations, including but not limited to the Act, may be made, and/or new statutes may be enacted or new regulations promulgated, which do not explicitly conflict with an express provision of this grant, and that the Grantee bears the risk that such may increase or decrease the Grantee's obligations under the grant.

Section 2: Rights of the Grantee.

(a) The Grantor hereby grants to the Grantee the exclusive right and privilege, subject to the terms and conditions of this grant and applicable regulations, to

conduct activities in the area identified in Addendum A of this grant ("granted area") that are described in a General Activities Plan (GAP) that has been approved by the Grantor. This grant does not, by itself, authorize any activity within the granted area.

(b) The rights granted to the Grantee herein are limited to those activities described in a GAP approved by the Grantor. The rights granted to the Grantee are limited by the grant-specific terms, conditions, and stipulations required by the Grantor per Addendum C.

(c) This grant does not authorize the Grantee to conduct activities on the Outer Continental Shelf (OCS) relating to or associated with the exploration for, or development or production of, oil, gas, or other seabed minerals.

Section 3: Reservations to the Grantor.

(a) All rights in the granted area not expressly granted to the Grantee by the Act, applicable regulations, this grant, or any approved GAP are hereby reserved to the Grantor.

(b) The Grantor retains the right to require revisions to an approved GAP, pursuant to 30 C.F.R. § 585.655.

(c) The Grantor reserves the right to suspend the Grantee's operations in accordance with the national security and defense provisions of section 12 of the Act and applicable regulations.

(d) The Grantor reserves the right to authorize other uses within the granted area that will not unreasonably interfere with activities described in Addendum "A."

Section 4: Payments.

The Grantee must make all rent payments in accordance with applicable regulations in 30 C.F.R Part 585, unless otherwise specified in Addendum "B."

Section 5: Plans.

The Grantee may conduct those activities described in Addendum "A" only in accordance with a GAP approved by the Grantor. The Grantee may not deviate from an approved GAP except as provided in applicable regulations in 30 CFR Part 585.

Section 6: Conduct of Activities.

The Grantee must conduct all activities in the granted area in accordance with an approved GAP, and with all applicable laws regulations.

The Grantee further agrees that no activities authorized by this grant will be carried out in a manner that:

(a) could unreasonably interfere with or endanger activities or operations carried out under any lease or grant issued or maintained pursuant to the Act, or under any other license or approval from any Federal agency;

(b) could cause any undue harm or damage to the environment;

(c) could create hazardous or unsafe conditions; or

(d) could adversely affect sites, structures, or objects of historical, cultural, or archaeological significance, without notice to and direction from the Grantor on how to proceed.

Section 7: Violations, Suspensions, Cancellations, and Remedies

If the Grantee fails to comply with (1) any of the provisions of the Act or regulations, (2) the approved GAP, or (3) the terms of this grant, including associated Addenda, the Grantor may exercise any of the remedies that are provided under the Act and applicable regulations, including, without limitation, issuance of cessation of operations orders, suspension or cancellation of the grant, and/or the imposition of penalties, in accordance with the Act and applicable regulations. The Grantor may also cancel this grant for reasons set forth in subsection 5(a)(2) of the Act (43 U.S.C. § 1334(a)(2)), or for other reasons provided by the Grantor pursuant to 30 C.F.R. § 585.437.

Non-enforcement by the Grantor of a remedy for any particular violation of the applicable provisions of the Act or regulations, or the terms of this grant, shall not prevent the Grantor from exercising any remedy, including cancellation of this grant, for any other violation or for the same violation occurring at any other time.

Section 8: Indemnification.

The Grantee hereby agrees to indemnify the Grantor for, and hold the Grantor harmless from, any claim caused by or resulting from any of the Grantee's operations or activities on the granted area or arising out of any activities conducted by or on behalf of the Grantee or its employees, contractors (including Operator, if applicable), subcontractors, or their employees, under this grant, including claims for:

a. loss or damage to natural resources,
b. the release of any petroleum or any Hazardous Materials,
c. other environmental injury of any kind,
d. damage to property,
e. injury to persons, and/or
f. costs or expenses incurred by the Grantor.

The Grantee shall not be liable for any losses or damages proximately caused by the activities of the Grantor or the Grantor's employees, contractors, subcontractors, or their

employees. The Grantee shall pay the Grantor for damages, costs, or expenses due pursuant to this section within ninety (90) days after written demand by the Grantor. Nothing in this grant shall be construed to waive any liability or relieve the Grantee from any penalties, sanctions, or claims that would otherwise apply by statute, regulation, operation of law, or could be imposed by the Grantor or other government agency acting under such laws.

"Hazardous Material" means

1. Any substance or material defined as hazardous, a pollutant, or a contaminant under the Comprehensive Environmental Response, Compensation, and Liability *Act* at 42 U.S.C. §§ 9601(14) and (33);
2. Any regulated substance as defined by the Resource Conservation and Recovery Act ("RCRA") at 42 U.S.C. § 6991 (7), whether or not contained in or released from underground storage tanks, and any hazardous waste regulated under RCRA pursuant to 42 U.S.C. §§ 6921, *et seq*;
3. Oil, as defined by the Clean Water Act at 33 U.S.C. § 1321(a)(1) and the Oil Pollution Act at 33 U.S.C. § 2701(23); or
4. Other substances that applicable Federal, state, tribal, or local laws define and regulate as "hazardous."

Section 9: Financial Assurance.

The Grantee must provide and maintain at all times a surety bond(s) or other form(s) of financial assurance approved by the Grantor in the amount specified in Addendum "B." As provided by the applicable regulations in 30 C.F.R. Part 585, if, at any time during the term of this grant, the Grantor requires additional financial assurance, then the Grantee shall furnish the additional financial assurance required by the Grantor in a form acceptable to the Grantor within ninety (90) days after receipt of Grantor's notice of such adjustment.

Section 10: Assignment or Transfer of Grant.

This grant may not be assigned or transferred in whole or in part without written approval of the Grantor. The Grantor reserves the right, in its sole discretion, to deny approval of the Grantee's application to transfer or assign all or part of this grant. Any assignment will be effective on the date the Grantor approves the Grantee's application. Any assignment made in contravention of this section is void.

Section 11: Relinquishment of Grant.

The Grantee may relinquish this entire grant or any officially designated subdivision thereof by filing with the appropriate office of the Grantor a written relinquishment application, in accordance with applicable regulations in 30 C.F.R. Part 585. No relinquishment of this grant or any portion thereof will relieve the Grantee or its surety of the obligations accrued hereunder, including but not limited to, the responsibility to remove property and restore the granted area pursuant to section 12 of this grant and applicable regulations.

Section 12: Removal of Property and Restoration of the Granted Area on Termination of Grant.

Unless otherwise authorized by the Grantor, pursuant to the applicable regulations in 30 C.F.R. Part 585, the Grantee must remove or decommission all facilities, projects, cables, pipelines, and obstructions and clear the seafloor of all obstructions created by the Grantee's activities on the granted area within 2 years following grant termination, whether by expiration, cancellation, contraction, or relinquishment, in accordance with any GAP and applicable regulations in 30 C.F.R. Part 585.

Section 13: Safety Requirements.

The Grantee must:

a. maintain all places of employment for activities authorized under this grant in compliance with occupational safety and health standards and, in addition, free from recognized hazards to employees of the Grantee or of any contractor or subcontractor operating under this grant;

b. maintain all operations within the granted area in compliance with regulations in 30 C.F.R. Part 585 and orders from the Grantor and other Federal agencies with jurisdiction, intended to protect persons, property, and the environment on the OCS; and

c. provide any requested documents and records, which are pertinent to occupational or public health, safety, or environmental protection, and allow prompt access, at the site of any operation or activity conducted under this grant, to any inspector authorized by the Grantor or other Federal agency with jurisdiction.

Section 14: Debarment Compliance.

The Grantee must comply with the Department of the Interior's non-procurement debarment and suspension regulations as set forth in 2 C.F.R. Parts 180 and 1400 and must communicate the requirement to comply with these regulations to persons with whom it does business related to this grant by including this requirement in all relevant contracts and transactions.

Section 15: Notices.

All notices or reports provided from one party to the other under the terms of this grant must be in writing, except as provided herein and in the applicable regulations in 30 C.F.R. Part 585. Written notices must be delivered to the parties' Grant Representative, as specifically listed in Addendum "A," either electronically, by hand, by facsimile, or by United States first class mail, adequate postage prepaid. Either party may notify the other of a change of address by doing so in writing. Until notice of any change of address is delivered as provided in this section, the last recorded address of either party will be deemed the address for all notices required under this grant. For all operational matters, notices must

be provided to the parties' Operations Representative, as specifically listed in Addendum "A," as well as the Grant Representative.

Section 16: Severability Clause.

If any provision of this grant is held unenforceable, all remaining provisions of this grant will remain in full force and effect.

Section 17: Substantial Deviation.

Pursuant to the applicable regulations in 30 C.F.R. Part 585, Grantor may cancel this grant if Grantor determines that any cable or pipeline constructed in the granted area substantially deviates from the Grantee's approved GAP.

Section 18: Modification.

Unless otherwise authorized by the applicable regulations in 30 C.F.R. Part 585, this grant may be modified or amended only by mutual agreement of the Grantor and the Grantee. No such modification or amendment shall be binding unless it is in writing and signed by the Grant Representatives of both the Grantor and the Grantee.

Grantee	The United States of America Grantor
(Signature of Authorized Officer)	(Signature of Authorized Officer)
(Name of Signatory)	(Name of Signatory)
(Title)	(Title)
(Date)	(Date)

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

ADDENDUM "A"

DESCRIPTION OF GRANTED AREA AND GRANT ACTIVITIES

Grant Number _____

I. Grantor and Grantee Contact Information

Grantee Company Number: _____

(a) Grantor's Contact Information

	Grant Representative	Operations Representative
Name		
Title		
Address		
Phone		
Fax		
Email		

(b) Grantee's Contact Information

	Grant Representative	Operations Representative
Name		
Title		
Address		
Phone		
Fax		
Email		

II. Description of Granted Area

III. Description of the Project

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

ADDENDUM "B"

GRANT TERM AND FINANCIAL SCHEDULE

Grant Number _____

I. Grant Term

II. Definitions

III. Payments

(a) ***Rent.*** The Grantee must pay rent as described below:

- Grant statute miles: _____
- Additional acres in grant project area: _____
- Annual Rental Rate: $_____ per statute mile or fraction thereof
- Annual Rental Rate: $_____ per acre or fraction thereof
- Rental fee for entire grant project area (using rounded up mileage and acreage):

  $_____

(b) Reporting, Validation, Audits, and Late Payments

IV. Financial Assurance

The Grantor will determine the amount of financial assurance requirements in accordance with applicable regulations at 30 C.F.R. Part 585. The amount of the financial assurance must be no less than the amount required to meet all grant obligations, including:

- The projected amount of payments due the Grantor over the next 12 months;
- Any past due payments;
- Other monetary obligations; and
- The estimated cost of decommissioning.

(a) Initial Financial Assurance Due Before Grant Issuance Date.

(b) Additional Financial Assurance.

(c) Adjustments to Financial Assurance Amounts.

The Grantor reserves the right to adjust the amount of any financial assurance requirement associated with this grant and/or reassess Grantee's cumulative grant obligations, including decommissioning obligations, pursuant to the applicable regulations in 30 C.F.R. Part 585.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

ADDENDUM "C"[1]

GRANT-SPECIFIC TERMS, CONDITIONS, AND STIPULATIONS

Grant Number _____

The Grantee's rights to conduct activities on the grant area are subject to the following terms, conditions, and stipulations:

The mitigation, monitoring, and reporting requirements listed in this Addendum C are adopted as terms and conditions of the grant. Monitoring results and required reports must be submitted to the Grantor as specified below:

Bureau of Ocean Energy Management
Office of Renewable Energy Programs
381 Elden Street, HM1328
Herndon, Virginia 20170
Phone: 703-787-1300
Fax: 703-787-1708

The Grantor may change this address upon notice to the Grantee in accordance with Section 15 of this grant.

[1] Note: Stipulations are developed on a case-by-case basis relating to location, technology utilized, and other relevant factors, including site-specific findings from project-specific environmental analyses.

[FR Doc. 2012–21275 Filed 8–28–12; 8:45 am]
BILLING CODE 4310–MR–P

DEPARTMENT OF THE INTERIOR

Bureau of Reclamation

Notice of Availability of the Draft Environmental Impact Statement for the Arkansas Valley Conduit and Long-Term Excess Capacity Master Contract, Fryingpan-Arkansas Project; Bent, Chaffee, Crowley, El Paso Pueblo, Fremont, Kiowa, Otero, and Prowers Counties, CO

AGENCY: Bureau of Reclamation, Interior.

ACTION: Notice of availability and public hearings.

SUMMARY: The Bureau of Reclamation has made available for public review and comment the draft environmental impact statement (EIS) for the Arkansas Valley Conduit and Long-Term Excess Capacity Contract, Fryingpan-Arkansas Project, Colorado.

The proposed Arkansas Valley Conduit, conveyance contract for the Pueblo Dam north-south outlet works interconnect, and long-term excess capacity master contract to store water in available space in Pueblo Reservoir would deliver high quality water that would meet Environmental Protection Agency and state water quality requirements and help water providers throughout the Arkansas River Basin in Colorado reliably meet existing and future water demands.

DATES: Submit written comments on the Draft EIS on or before October 30, 2012.

Public hearings will be held on:

1. Monday, September 24, 2012, 6:30 p.m. to 8 p.m., Salida, Colorado.
2. Tuesday, September 25, 2012, 1 p.m. to 2:30 p.m., and 6:30 p.m. to 8 p.m., Pueblo, Colorado.
3. Wednesday, September 26, 2012, 6:30 p.m. to 8 p.m., La Junta, Colorado.
4. Thursday, September 27, 2012, 6:30 p.m. to 8 p.m., Lamar, Colorado.

ADDRESSES: Submit written comments on the Draft EIS to Ms. J. Signe Snortland, Bureau of Reclamation, P.O. Box 1017, Bismarck, North Dakota 58502; or by email to *jsnortland@usbr.gov*.

The public hearings will be held at:

1. Salida—Salida Community Center, 305 F Street, Salida, Colorado 81201.
2. Pueblo—Pueblo Convention Center, 320 Central Main St., Pueblo, Colorado 81003.
3. Otero—Otero Junior College, 2222 San Juan Ave., La Junta, Colorado 81050.
4. Lamar—Lamar Community Building, 610 South 6th Street, Lamar, Colorado 81052.

To request an Executive Summary and DVD of the Draft EIS, please contact J. Signe Snortland as indicated above, or call 701–221–1278. The Draft EIS may be viewed or downloaded at the Bureau of Reclamation's Web site at *http://www.usbr.gov/avceis*. See Supplementary Information section for locations where copies of the Draft EIS are available for public review.

FOR FURTHER INFORMATION CONTACT: J. Signe Snortland, Environmental Specialist at *jsnortland@usbr.gov*.

SUPPLEMENTARY INFORMATION:

Three proposed federal actions by the Bureau of Reclamation are analyzed in the Draft EIS: (1) Construct and operate the Arkansas Valley Conduit (AVC) and enter into a repayment contract with Southeastern Colorado Water Conservancy District; (2) enter into a conveyance contract with various water providers for use of a pipeline interconnection between Pueblo Dam's south and north outlet works; and (3) enter into a excess capacity master contract with Southeastern Colorado Water Conservancy District to store water in Pueblo Reservoir. While serving similar water supply and delivery purposes, the proposed actions are independent of each other.

The AVC was authorized by Congress in the original Fryingpan-Arkansas legislation in 1962 (Pub. L. 87–590). However, it was not constructed with the original project, primarily because of the beneficiaries' inability to repay the construction costs. In 2009, Congress amended the original legislation in Public Law 111–11, which authorized annual federal funding as necessary for constructing AVC, and included a cost sharing plan with 65 percent federal and 35 percent local funding. The Bureau of Reclamation would enter into a 50-year repayment contract with Southeastern Colorado Water Conservancy District which would be responsible for paying the local share.

The AVC would be a water supply pipeline to help meet existing and future municipal and industrial water demands of southeastern Colorado water providers. Forty towns and rural domestic water supply systems in Pueblo, Crowley, Otero, Bent, Prowers, and Kiowa counties would participate in the AVC. Water providers are requesting annual water deliveries of 10,256 acre-feet to help meet 2070 water demands. Fourteen of these water providers are currently under orders by the Colorado Department of Public Health and Environment to remove naturally-occurring radioactive contaminants from their surface or groundwater source using expensive treatment or to find another better quality water source.

The interconnection would move water between the existing south outlet works and future north outlet works (currently under construction as part of the Southern Deliver System) at Pueblo Reservoir during emergencies or periodic maintenance activities. Interconnect operations would require a long-term (40-year) contract between AVC, Pueblo Fish Hatchery, Board of Water Works of Pueblo, Pueblo West, Southern Delivery System, and Fountain Valley Authority.

The purpose of the excess capacity master contract would be to allow use of extra storage space in Pueblo Reservoir to store up to 29,938 acre-feet of water. A long-term storage contract, rather than short-term contracts, is needed by 37 water providers to help meet projected demand through 2060 (the term of the contract).

Some of the resources potentially affected by the proposed actions that are evaluated in the Draft EIS include: surface water quantity and quality in the Arkansas River and Fryingpan-Arkansas reservoirs, groundwater, climate change, recreation biological resources, human environment, socioeconomics, environmental justice, and historic properties.

Hearing Process and Distribution Information

Requests to make oral comments at the public hearing may be made at the hearing. In order to ensure that all those interested in providing oral comments have an opportunity to do so, oral comments at the hearing will be limited to five minutes. Comments will be recorded by a court reporter. Speakers will be called in the order indicated on the sign in list for speaking. Speakers not present when called will be recalled at the end of the scheduled speakers. Speakers may provide written versions of their oral comments or other additional written comments for the hearing record. Longer comments should be summarized at the public hearing and submitted in writing either at the public hearing or identified as hearing comments and mailed within seven days of the hearing date to J. Signe Snortland as indicated under the Addresses section.

Copies of the Draft EIS are available for public review at the following locations:

- Bureau of Reclamation, Eastern Colorado Area Office, 11056 West

DIVISIONS
ENERGY
GAS AND OIL
GEOLOGY AND MINERAL RESOURCES
MINED LAND RECLAMATION
MINERAL MINING
MINES
ADMINISTRATION

COMMONWEALTH OF VIRGINIA

Department of Mines, Minerals and Energy
Washington Building, 8th Floor
1100 Bank Street
Richmond, Virginia 23219-3638
(804) 692-3200 FAX (804) 692-3237
www.dmme.virginia.gov

September 18, 2012

Department of the Interior
Bureau of Ocean Energy Management
Attention: Jennifer Golladay
381 Elden Street, HM 1328
Herndon, Virginia 20170

Ref: DMME Response to request for comment, Bureau of Ocean Energy Management (BOEM), Federal Register/Vol. 77, No 168/ Wednesday, August 29, 2012

Dear Ms. Golladay:

The Virginia Department of Mines, Minerals and Energy (DMME) respectfully submits the enclosed comments in response to the Bureau of Ocean Energy Management's request for comment on its draft Form 0009 for application for Right-of-Way Grant of Submerged Lands on the Outer Continental Shelf to Support Renewable Energy Development.

DMME understands that BOEM Form 0009 is similar in design and format to at least one other BOEM form associated with the lease of submerged lands and the development of renewable energy projects on the OCS. DMME encourages BOEM to extend this effort to streamline other significant processes that must be completed by a wind energy project developer to simplify and reduce potential duplication of efforts that otherwise could occur when multiple related forms and processes must be completed for a single project. There may be opportunities to similarly streamline the agency process for developing, for example, Rights-of-Use and Easement Grants, Site Assessment Plans, Construction and Operations Plans and General Activities Plans.

The draft form on Page 2, Section 6, Conduct of Activities, states that "The Grantee further agrees that no activities authorized by this grant will be carried out in a manner that (a) could unreasonably interfere with or endanger activities or operations carried out under any lease or grant issued or maintained pursuant to the Act (Outer Continental Shelf Lands Act), or under any other license of approval from any Federal agency." DMME requests that BOEM consider

expanding this statement to more explicitly address some of the potential conflicts that a Grantee would be expected to avoid in order to ensure that a ROW grant does not unreasonably interfere with or endanger other activities or operations, such as the development of offshore oil and gas resources and offshore mineral deposits, or the development of other cable projects to support other wind energy projects.

DMME commends BOEM for its work to accelerate development of low-cost offshore wind energy to benefit Virginia residents, including BOEM efforts to work closely with its Virginia Intergovernmental Task Force to promote offshore wind by efficiently allocating renewable energy leases and BOEM's accommodation of factors that vary in importance by state as the agency designs the process to award leases to developers. The path of transmission cabling that traverses state waters and submerged lands to bring energy generated offshore to onshore transmission and distribution infrastructure is one of the factors associated with OCS wind development that will be important to Virginia and other coastal states. DMME encourages BOEM to continue to use the Task Force and other agencies of the Commonwealth of Virginia as appropriate to ensure good coordination of the federal ROW process with state processes and jurisdiction.

Virginia supports and is actively pursuing an "all of the above" strategy for expanding energy production in Virginia. This includes strong support and focused efforts to promote development of Virginia's offshore wind resources.

Sincerely,

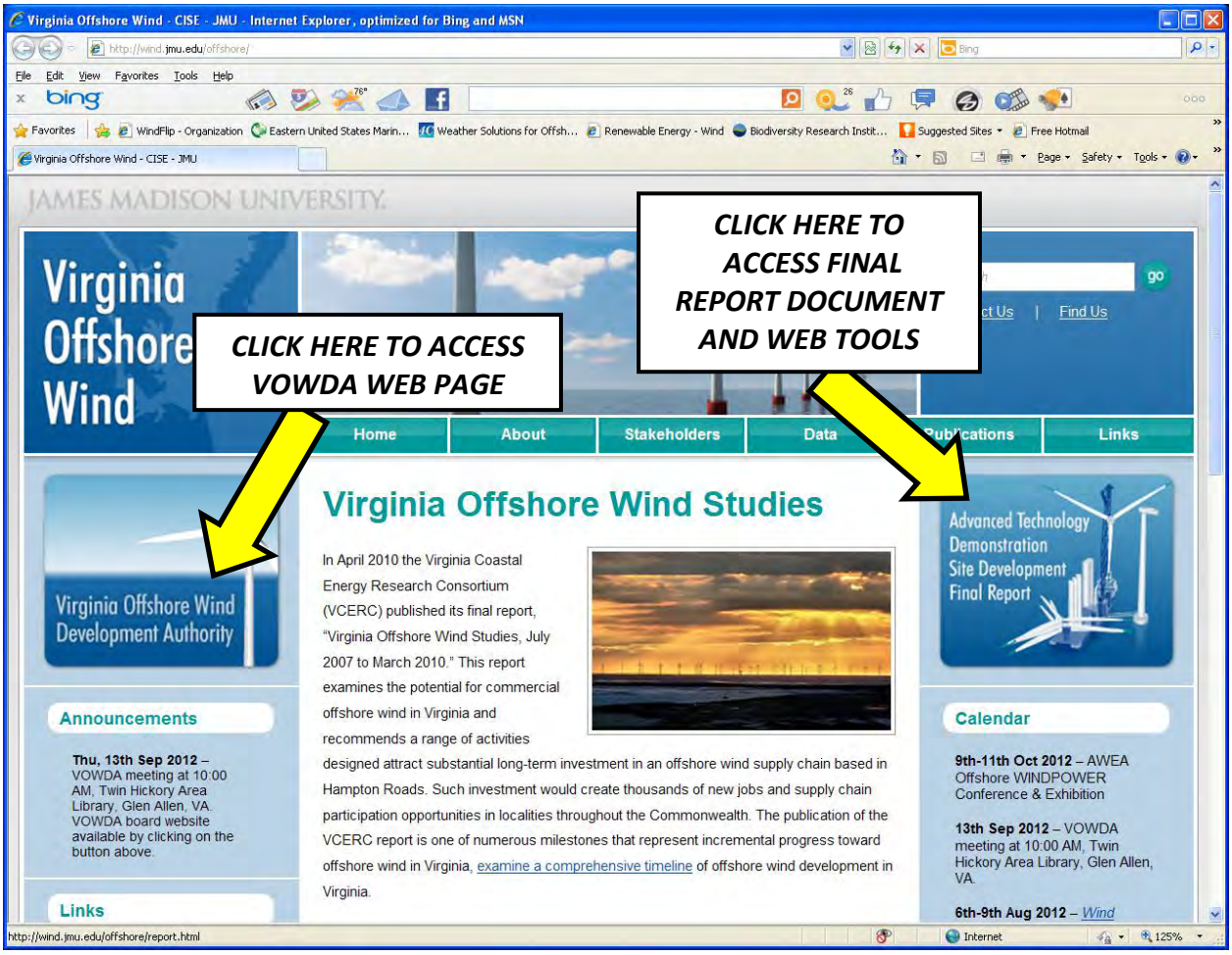
Conrad T. Spangler, III
Director

APPENDIX G

VIRGINIA OFFSHORE WIND WEBSITE

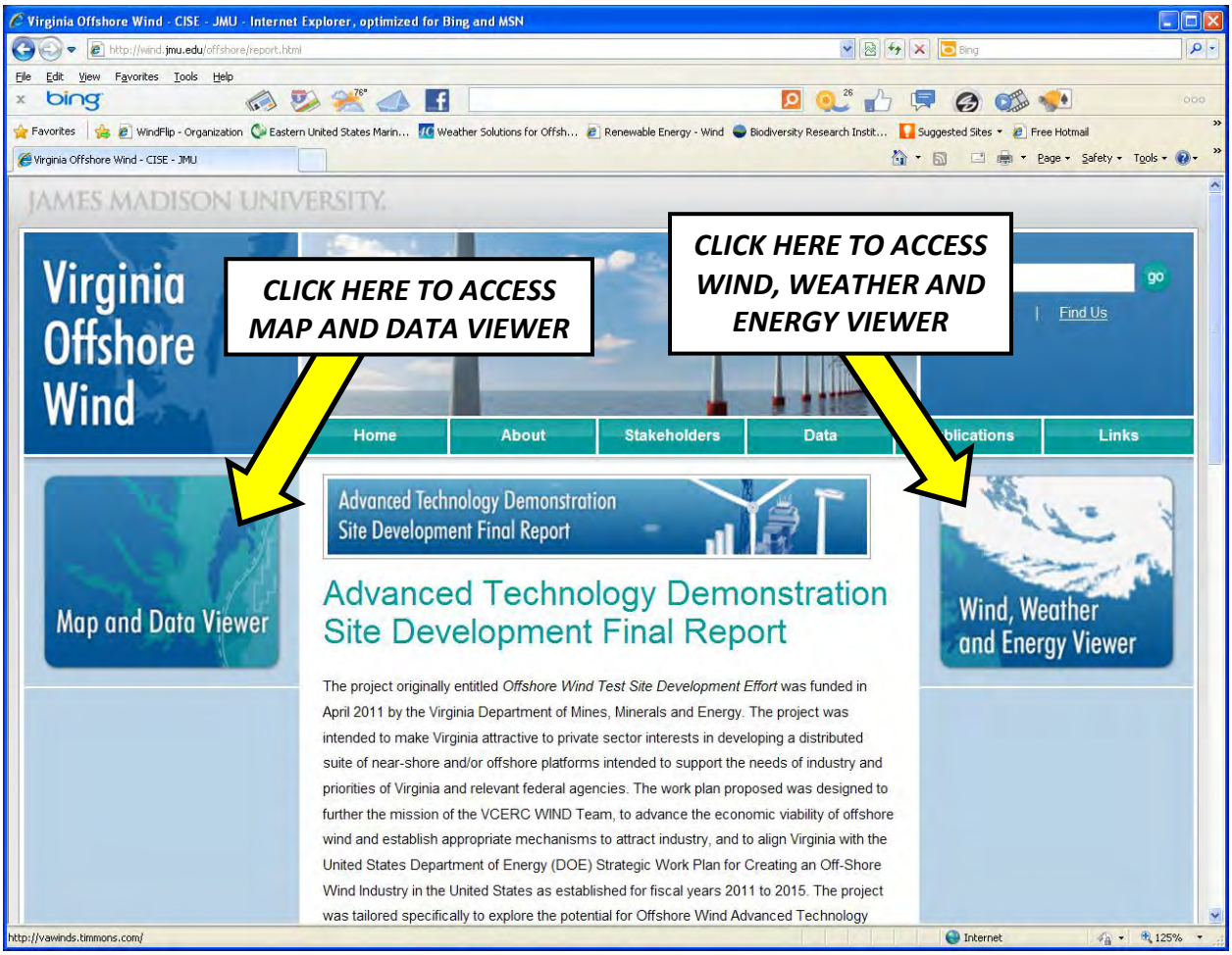
VIRGINIA OFFSHORE WIND WEB SITE

This site features a main narrative in the center of the main page that describes the lead up to the current studies managed and directed by the Virginia Center for Wind Energy at James Madison University (VCWE-JMU) and the Advanced Research Institute at Virginia Tech (VT-ARI). A synopsis of each study is described briefly; **Announcements** and **Links** are provided in the left-hand border and there is a horizontally-oriented **Menu Bar** across the top with pull-down sub-menus. **Stakeholders** and **Data** are in development and **Publications** and **Links** are already well populated and will continue to be expanded. A screen capture of the main page is shown below.



The button at the top left that reads **Virginia Offshore Wind Development Authority** brings one to the new VOWDA web page [://wind.jmu.edu/offshore/vowda/index.html], which includes nearly identical functionality and content to that which DMME had been hosting previously. Links to the VOWDA web page are also available on the DMME web site.

The button at the top right that reads **Advanced Technology Demonstration Site Development Final Report** brings the user to a new page with a concise description of the project and links (if one scrolls down) to the report text and appendices. The buttons to the left and right (**Map and Data Viewer** and **Wind, Weather and Energy Viewer** respectively) provide navigation to each of these viewers which are described within the report and when one accesses the viewers.



The **Map and Data Viewer** supports access to a select subset of the myriad publically-accessible GIS data sets that were estimated to be of greatest relevance and interest to the broader community of offshore wind stakeholders.

The **Wind, Weather and Energy Viewer** opens with a 'flash screen' where one can choose to 'Learn more' or 'Get started'. The tabs under 'Learn more' provide a very concise explanation of the functionality of the site as well as definitions, more detailed descriptions are provided in the final report. When one closes the 'Learn more' window they enter the active phase of the site and see a pre-defined map of the Virginia water space (which one can expand, contract, and move); icons shortly appear that describe locations of sensors that provide real-time data,

and the *Wind Energy Area* is also shown by default. If one clicks on one of the orange arrows, a popup window appears that presents *Current Conditions* and simultaneously *Modeled Conditions*, as well as *Energy Climatology* which appears to the right. If one clicks anywhere else, only *Modeled Conditions* and *Energy Climatology* are shown (since no sensors are accessible there). The only user-adjustable parameter available in this first version of the viewer is the slider beneath the *Energy Climatology* that allows one to adjust the time frame (down to the month) across which **Modeled Average Wind Speed**, **Capacity Factor**, and **Wind Energy Produced** are calculated (estimated) at whichever location is selected by the user.

APPENDIX H

PJM INTERCONNECTION INITIAL MODELING

IMPACTS OF OFFSHORE WIND TRANSMISSION

PJM Interconnection Initial Modeling—Impacts of Offshore Wind Transmission

The study results show that the flows going onshore from the offshore HVDC terminals are indifferent to the wind injection point, and, more importantly, that power flows from the Navy (Fentress) HVDC onshore terminal is always flowing into the HVDC line, going north, regardless of the amount or location of any offshore wind facilities. This is a result of the HVDC's ability to bypass areas of onshore congestion into higher priced northern electric markets (Figure 1).

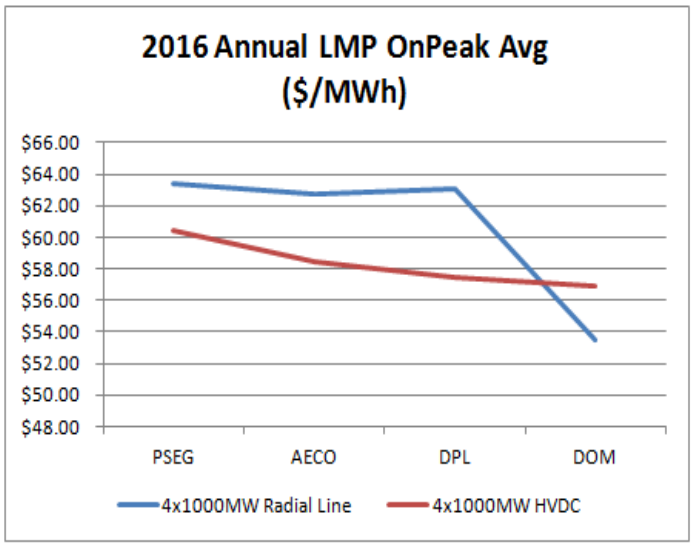
Figure 1:

Net Line Flows out from HVDC Terminals - Total Annual Net (MWH)				
HVDC Terminal	AWC 01	AWC 02	AWC 03	AWC 04
	JOA Base Scenario with HVDC	4000MW Installed Wind Hudson	4000MW Installed Wind Cardiff	4x1000MW Installed Wind
HUDSON1	3,240,283	6,260,034	6,262,926	6,261,072
CARDIFF	192,439	2,686,087	2,681,628	2,686,236
INDRIV 4	13,795,529	15,670,176	15,671,436	15,678,828
06NAVYS	(17,311,531)	(8,290,231)	(8,289,982)	(8,300,109)
Total flows toward shore	**(83,280)**	**16,326,066**	**16,326,008**	**16,326,027**

The cost implications on the locational marginal price (LMP) for on-peak electricity indicate that the cost to Dominion zone will be higher for a HVDC backbone scenario than radial connections in both scenarios considered, whether a single 4000 MW radial connection at a single terminal (in this case the Hudson HVDC terminal), or individual 1000 MW radial HVDC connections at each of the four HVDC terminals. This price differential for Dominion is likely to be even greater compared with AC radial connections recommended in the Dominion/ABB study (Figure 2).

Figure 2:

Scenario	LMP OnPeak Avg: ($)/(MWH)	Area			
		PSEG	AECO	DPL	DOM
AWC 04	4x1000MW Radial Line	$63.41	$62.69	$63.04	$53.51
AWC 07	4x1000MW HVDC	$60.46	$58.47	$57.49	$56.92



Scenario	LMP OnPeak Avg: ($)/(MWH)	Area			
		PSEG	AECO	DPL	DOM
AWC 02	4000MW Hudson Radial Line	$59.97	$64.03	$64.85	$54.26
AWC 05	4000MW Hudson HVDC	$60.45	$58.45	$57.47	$56.91