

Maryland Offshore Wind Update

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*Andrew Gohn
Senior Clean Energy Program Manager*

Maryland Energy

ADMINISTRATION

Powering Maryland's Future

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Presentation will focus on:

- MEA Zone Division Approach
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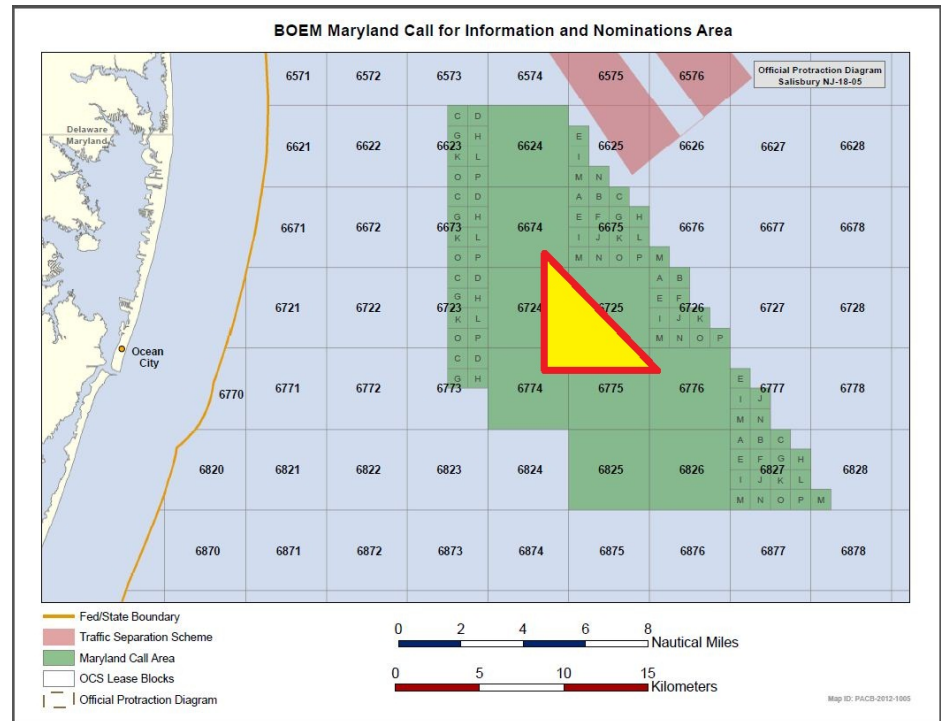


Zone Division

- The Energy Policy Act of 2005 created a competitive leasing framework that was not always in alignment with State offshore wind incentive policies.
- Although Multi-Factor analysis creates a benefit for pre-existing Power Purchase Agreements or OREC orders, the timing may not work to ensure competition for State incentives.
- In early 2012, MEA and BOEM consulted on possible zone division of the MD WEA as a strategy to ensure multiple leaseholds with site control that could compete for State incentives.

Zone Division Policy Goals

- Bifurcation of the MD WEA supports several important policy goals
 - Efficient Use of Resource
 - Diversity of Project Response
 - Relative Ease of Lease Transfers



Example of “inefficient use of resources”

Zone Division Principles

- Equivalency
 - The threshold principle for dividing the WEA into two zones is to try to achieve two areas that are roughly equivalent in suitability for deployment.
- Maximum Resource
 - Division between zones should be along lines that are as straight as possible in order to minimize potential buffer area and maximize available contiguous project space.
- Distance from shore
 - Both deployment zones have adequate minimum distance to shore. This is necessary to ensure radial line transmission opportunities for both areas as well as creating a cost of deployment balance between the areas. Therefore, any primary line of division must run generally from east to west.

Zone Division Criteria

- MEA worked with the Maryland Department of Natural Resources (DNR) to review the following criteria:
 1. Wind Speed
 2. Prevailing Wind Direction
 3. Bathymetry
 4. Distance to Shore
 5. Transmission Requirements
 6. Shipping Lanes and Potential U.S. Coast Guard Requirements
 7. Inter-project Wake Effects and Potential Buffer Requirement
 8. Fisheries Use
 9. Military Use
 10. Additional Stakeholder Considerations

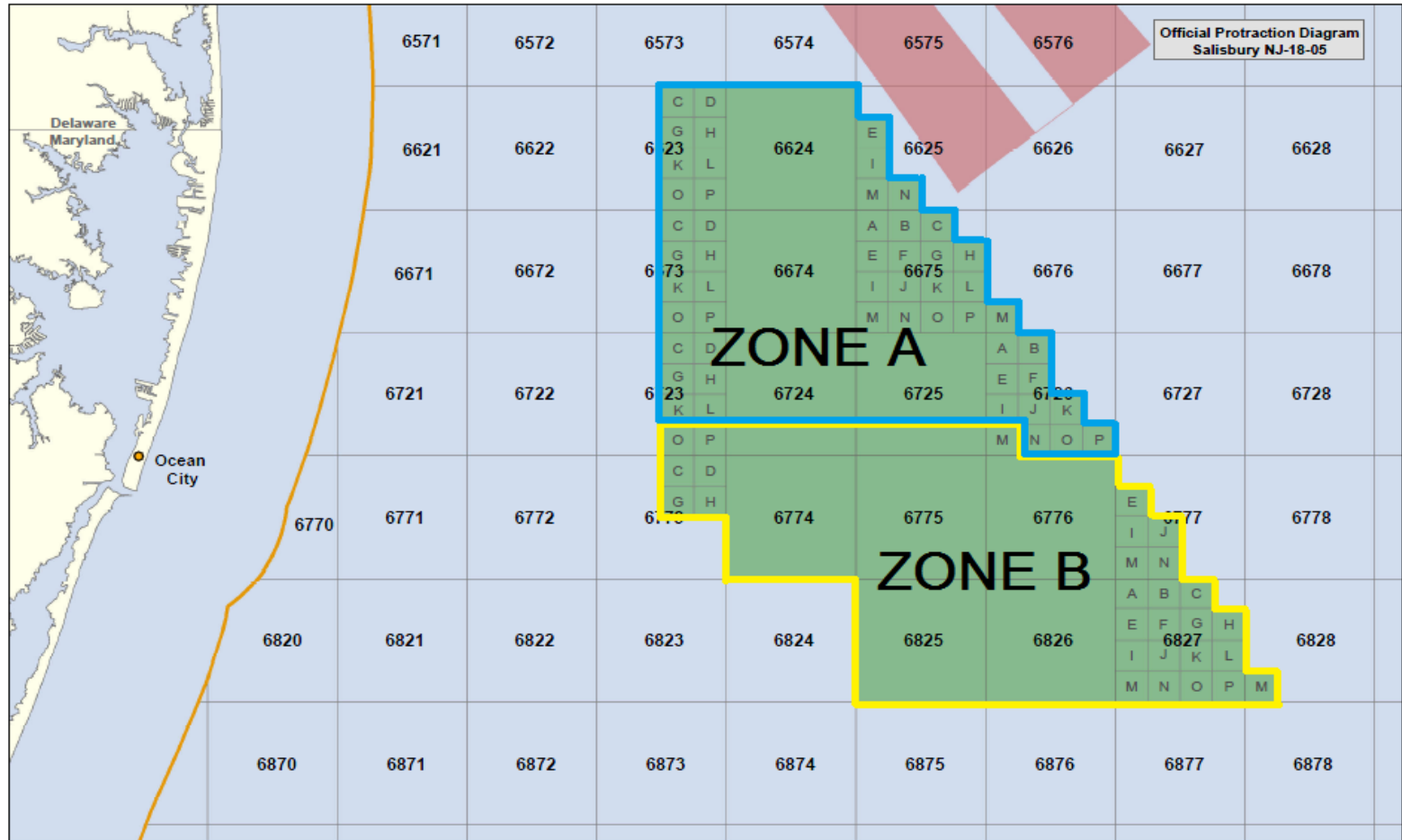
Zone Division Research

- In order to best evaluate these criteria, MEA sought input from the offshore wind development community. Specifically, MEA reached out to firms that have expressed interest in Maryland's WEA through the BOEM Request for Information and Call for Information and nominations.
- Ultimately 3 companies provided recommendations to MEA. This input was extremely helpful to MEA and DNR as we developed a bifurcation plan, although no company's input was dispositive with regard to any of the listed criteria.

Zone Division Analysis

- Generally, we found the southern zone to have more significant deployment challenges than the northern zone. We considered the cost of development in the southeastern region to be the most significant, although fisheries use also weighed heavily. For this reason, we chose a bifurcation strategy that benefitted the southern zone by 8 aliquots, or $\frac{1}{4}$ of an OCS block. Although all of this analysis required a certain amount of subjective judgment, we essentially:
 - 1) Quantified our perception of the number of aliquots at risk of being excluded from development;
 - 2) Multiplied the number of aliquots at risk of being excluded from development by the % chance of such exclusion; and
 - 3) Reassigned this number of aliquots in a way that preserved the shortest, straightest primary line of division.

Zone Division Recommendation



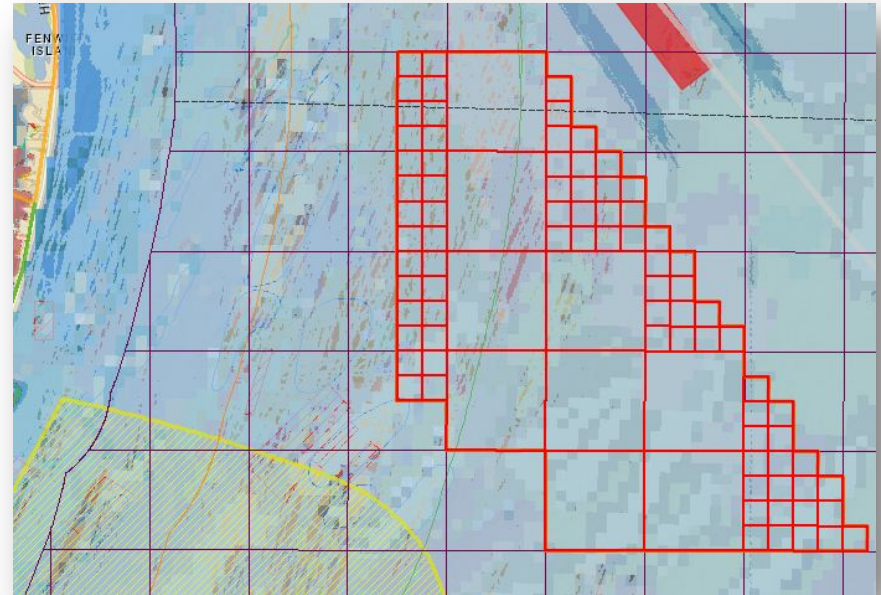
Offshore Wind Development Fund

- In settlement of the merger between Exelon Corporation and Constellation Energy Group, Exelon made available \$30 million for the advancement of offshore wind energy off the coast of Maryland. MEA is using this fund to:
 - Invest in infrastructure, industrial capacity, education and workforce development
 - Develop meteorological, oceanographic and ecological resource data that will reduce the cost of offshore wind energy



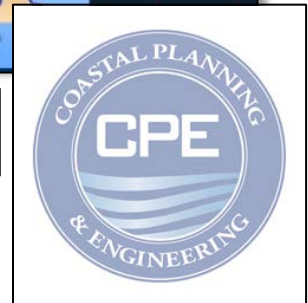
Offshore Wind Development Fund

- Environmental Surveys
 - Benthic, Pelagic, Ornithological, Sea Mammal, Bat
- Geophysical Survey
- Geotechnical Assistance
- Ultimately, this data will be necessary to compile a project proposal Construction and Operations Plan, which must meet BOEM for project approval.



Geophysical Survey

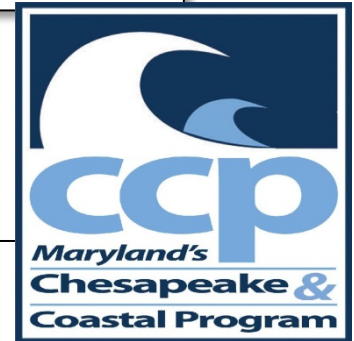
- Geophysical Survey will be conducted during the Summer of 2013
- Geophysical Remote Sensing:
 - Side Scan Sonar
 - Multi-Beam Bathymetry
 - Magnetometry
 - Seismic Sub-surface Imaging



Offshore Wind Development Fund

Inter-agency MOU

- MEA and DNR have signed an interagency Memorandum of Understanding to conduct environmental surveys of the Maryland Wind Energy Area.
- This partnership builds on successful cooperation on marine spatial planning efforts and coordination of federal engagement.



Offshore Wind Development Fund

Additional Proposed OSWDF Studies:

- Benthic Resource Characterization and Mapping in State Waters (Combined Sonar Mapping and Directed Sampling)
- Bottom Habitat Mapping.
- Wildlife Abundance, Distribution, and Diversity
- Marine Mammal Survey
- Assessment of Benthic Communities in Maryland's Offshore WEA
- Bat Interactions with Wind Turbines
- Assessment of Offshore Winds and Vertical Wind Shear

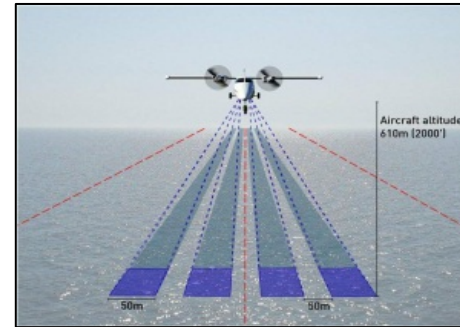
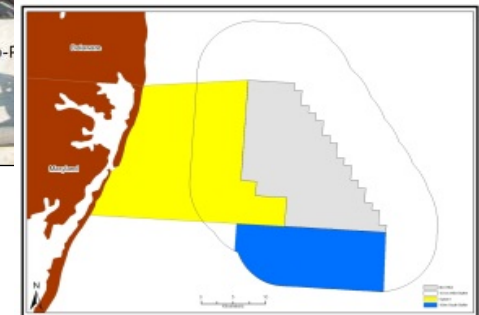
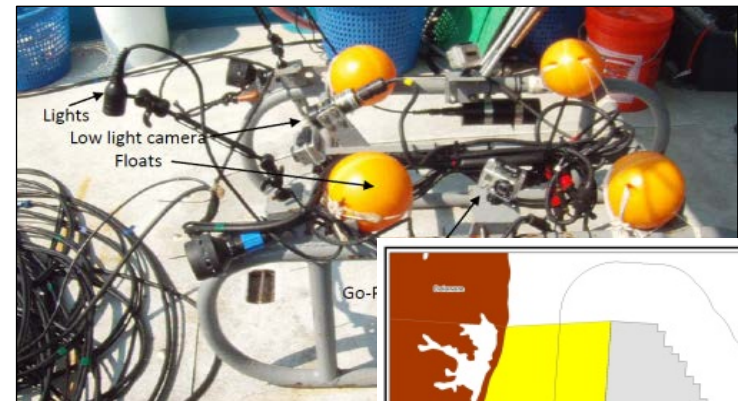


Image courtesy NOAA



Maryland Offshore Wind Energy Act of 2013

- The Governor has introduced the Maryland Offshore Wind Energy Act of 2013
- Substantially similar to last year's bill which passed 88-47 out of the Maryland House of Delegates, it got held up in the Senate Finance Committee.
- Media reports indicate that the legislation now has the necessary support and includes over half of the Maryland Senate as co-sponsors.

A BILL ENTITLED

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Maryland Offshore Wind Energy Act of 2013

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Maryland Offshore Wind Energy Act of 2013

- HB 226 / SB 275 creates a regulatory framework to incentivize offshore wind by establishing a requirement that electricity suppliers purchase Offshore Renewable Energy Credits, or ORECs.
- The OREC model is conceptually similar to requirements the General Assembly has already set for solar energy. At its simplest, the bill will likewise carve out up to 2.5% of the state's energy supply for offshore wind energy.
- The legislation is expected to support the construction of a 200 MW major offshore energy project off of Maryland's coast.



Contact Information

Andrew Gohn

Senior Clean Energy Program Manager

Maryland Energy Administration

agohn@energy.state.md.us

410-260-7190