Partnering for Safe, Secure and Resilient Port Operations

Status of Atlantic Outer Continental Shelf Renewable Energy Development

15th Biennial Harbor Safety Committee and Area Maritime Security Committee Conference, August 25-27

Darryl François, Office of Renewable Energy Programs
Bureau of Ocean Energy Management

BOEM's Staged Offshore Renewable Energy Authorization Process

Planning and Analysis

Leasing

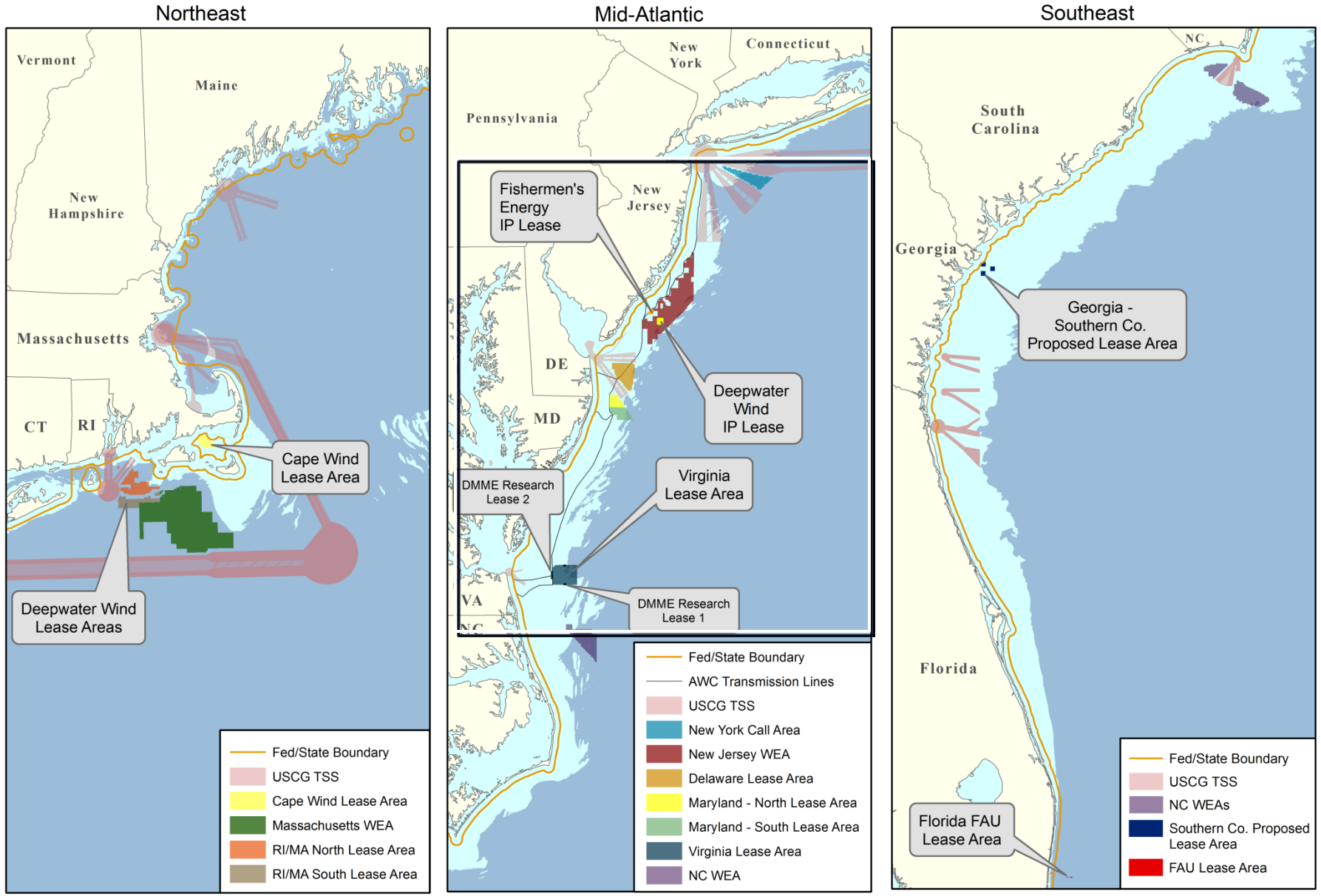
Site Assessment

Construction and Operations

Commercial Vessel Traffic

- Coordination with the U.S. Coast Guard since 2009 through
  - Intergovernmental task forces
  - Interagency meetings
  - Joint presentations at conferences and workshops
  - Data analysis
- Automatic Identification System (AIS) data first acquired by BOEM in 2010/2011
  - AIS analysis first used to inform Virginia WEA development
  - AIS data now includes 2009-2012
- Feedback from the maritime community has informed development of all Atlantic Wind Energy Areas

Atlantic OCS Renewable Energy - Massachusetts to Florida



Bathymetry

- Up to 30 meters
- More than 30 meters

0 50 100 150 200 250

Nautical Miles

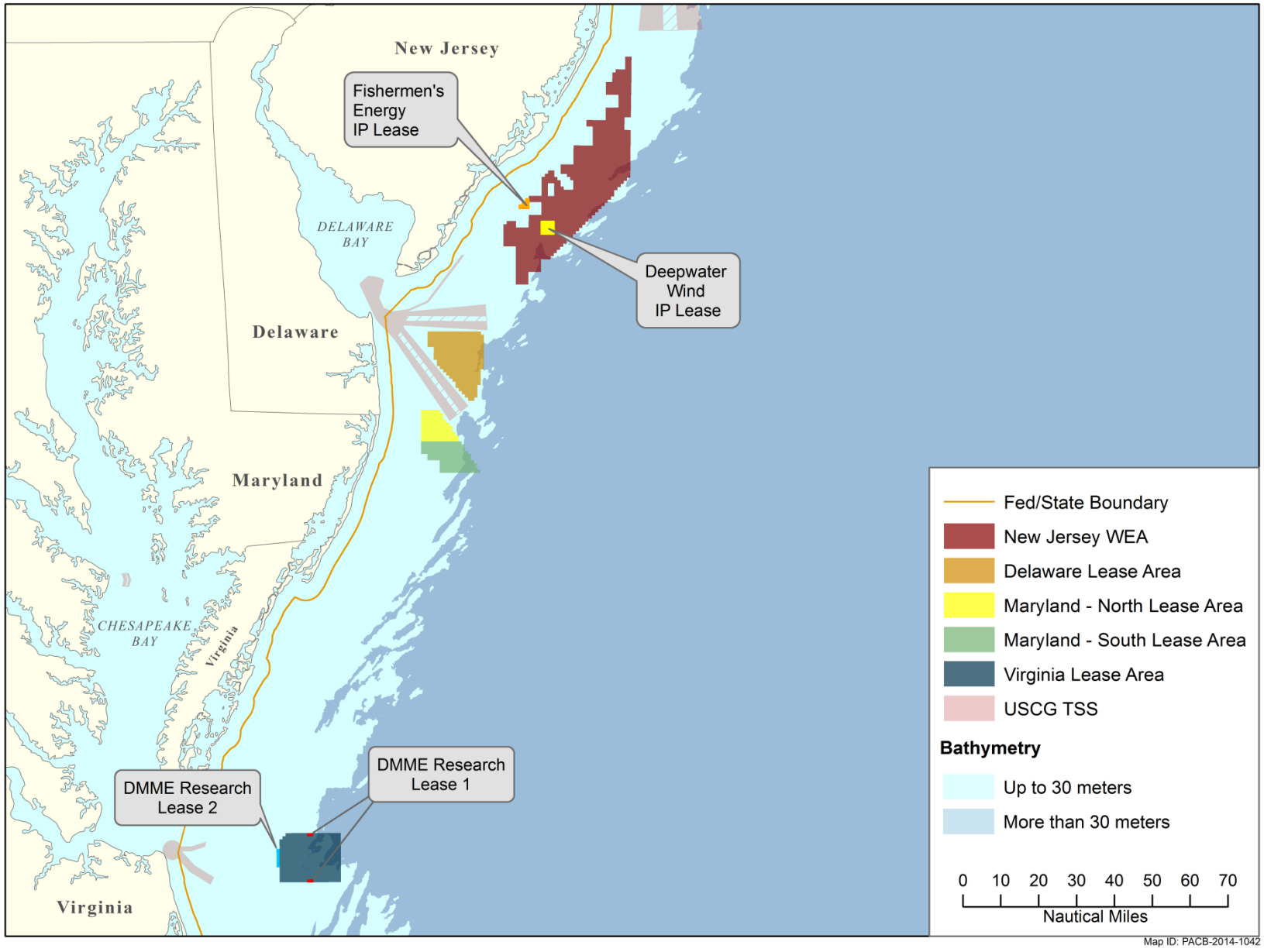
Map ID: PACB-2014-1042

Leasing and Potential Leasing

- Effective Dates
  - Rhode Island – October 2013
  - Delaware – January 2013
  - Virginia – November 2013
  - Maryland – October 2014(?)
- New Jersey, Massachusetts - Proposed Sales
- North Carolina Wind Energy Areas - Environmental Assessment

OC S Acreage Leased (or proposed)

Lease Area	# of OCS Blocks	Acres
Cape Wind (468 MW - nameplate capacity)	5.17	29,425
Rhode Island (2 leases)	28.94	164,749
Delaware	16.94	96,430
Virginia	19.81	112,798
Maryland (2 leases)	14	79,706
New Jersey WEA (2 leases proposed)	60.38	343,732
Massachusetts WEA (4 leases proposed)	130.5	742,974


New Jersey
Fishermen's Energy IP Lease
DELAWARE BAY
Deepwater Wind IP Lease
Delaware
Maryland
CHESAPEAKE BAY
Virginia
DMME Research Lease 2
DMME Research Lease 1
Virginia
Fed/State Boundary
New Jersey WEA
Delaware Lease Area
Maryland - North Lease Area
Maryland - South Lease Area
Virginia Lease Area
USCG TSS
Bathymetry
Up to 30 meters
More than 30 meters
0 10 20 30 40 50 60 70
Nautical Miles
Map ID: PACB-2014-1042

After Lease Issuance

- Site Assessment – from 1 to 5 years
  - Wind resource Assessment – meteorological and ocean conditions
  - Site Characterization Surveys – bottom and sub-bottom characterization, area activities, species activity, cultural resources
- Construction and Operations Plan (COP)
  - Conceptual project plan -- describes proposed location of turbines, service platforms and cabling and support activities, and schedule of activities
  - Subject to environmental analysis – from 12 to 18 months
- COP approval
  - Could result in additional terms and conditions on operator activity
  - Begins a 25 year operational term

After COP Approval

- Additional survey and data analysis that leads to
  - Facility Design Report (FDR)
    - Site specific engineering data for facilities
  - Fabrication and Installation Report (FIR)
    - Methodology for fabrication, construction, and installation of turbines, service platforms and cabling
- FDR and FIR must be completely consistent with COP environmental analysis
- After FDR/FIR review construction can begin

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Latest News

Western Gulf of Mexico Lease Sale Yields $110 Million in High Bids on More Than 400,000 Acres

Interior Auctions 80,000 Acres Offshore Maryland for Wind Energy Development, Advances President's Climate Action Plan

BOEM to Modernize Financial Assurance and Risk Management to Better Address Potential Costs, Liability of Offshore Energy Development

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Quick Links

- Industry eSubmissions
- National Ocean Policy
- Mid-Atlantic Regional Planning Body (MidA RPB)
- Statistics and Facts
- Environmental Stewardship
- Non-Energy Minerals
- Public Engagement Opportunities

Offshore Commercial Wind Energy Development in New Jersey: As part of President Obama's Climate Action Plan, Secretary of the Interior Sally Jewell and BOEM Acting Director Walter Cruickshank announced the proposed sale of leases for nearly 344,000 acres.

Read More

BOEM, North Carolina Ink Agreement on Evaluating Sand Resources: Under the two-year cooperative agreement totaling $200,000, North Carolina will evaluate and consolidate existing geological and geophysical data offshore North Carolina to help plan for future coastal resilience.

Read More

BOEM OCEAN SCIENCE

Read the new issue of Ocean Science on mapping.

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Renewable Energy Programs

- Regulatory Framework and Guidelines
- Lease and Grant Information
- Stakeholder Engagement
- State Activities
- Studies
- Mapping & Data
- Historic Preservation Activities
- Fact Sheets

Renewable Energy

In 2009, President Barack Obama announced the final regulations for the Outer Continental Shelf (OCS) Renewable Energy Program, which was authorized by the Energy Policy Act of 2005 (EPAct). These regulations provide a framework for issuing leases, easements and rights-of-way for OCS activities that support production and transmission of energy from sources other than oil and natural gas. Department of the Interior's Bureau of Ocean Energy Management (BOEM) is responsible for offshore renewable energy development in Federal waters and anticipates future development on the OCS from three general sources: offshore wind energy, ocean wave energy, and current wave energy.

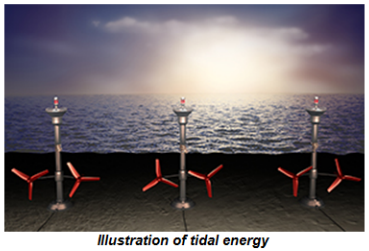

Illustration of tidal energy

- **Offshore Wind Energy.** Wind turbines have been installed offshore a number of countries to harness the energy of the moving air over the oceans and convert it to electricity. Offshore winds tend to flow at higher sustained speeds than onshore winds, making turbines more efficient.
- **Ocean Wave Energy (Hydrokinetic).** There is tremendous energy in ocean waves. Wave power devices extract energy directly from the surface motion of ocean waves. A variety of technologies have been proposed to capture that energy, and some of the more promising designs are undergoing demonstration testing. The Northwestern Coast of the United States has especially high potential for wave energy development, and is one of only a few areas in the world with abundant available wave power resources.
- **Ocean Current Energy (Hydrokinetic).** Ocean currents contain an enormous amount of energy that can be captured and converted to a usable form. Some of the ocean currents on the OCS are the Gulf Stream, Florida Straits Current, and California Current. Submerged water turbines, similar to wind turbines, may be deployed on the OCS in the coming years to extract energy from ocean currents.

For more information about renewable energy, click on the links below.

- Offshore Renewable Energy Guide
- Regulatory Framework and Guidelines
- Lease and Grant Information
- Stakeholder Engagement
- State Activities
- Studies

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- Stakeholder Engagement
- State Activities
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  - Delaware
  - Florida
  - Georgia
  - Hawaii
  - Maine
  - Maryland
  - Massachusetts
  - New Jersey
  - New York
  - North Carolina
  - Oregon
  - Rhode Island
  - South Carolina

State Activities

BOEM has seen very strong interest in offshore renewable energy projects on the Outer Continental Shelf (OCS). BOEM is working closely with several states regarding offshore energy development and is in the process of coordinating federal-state task forces in certain coastal states. A summary of the status of activity in the different states can be found below:

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Thank you!

More information at:

www.boem.gov

→ "Renewable Energy Programs"

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