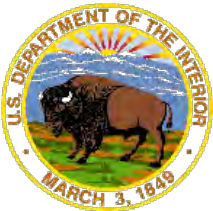


***BOEM Update on Offshore
Marine Hydrokinetic Projects***

Doug Boren

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Bureau of Ocean Energy Management
Pacific OCS Region

July 17, 2015 • Portland, Oregon



Bureau within the Department of the Interior (DOI)

- Oversees development of nation's energy and mineral resources on the Outer Continental Shelf (OCS)

OCS Lands Act of 1953 as amended, including amendments per Energy Policy Act of 2005

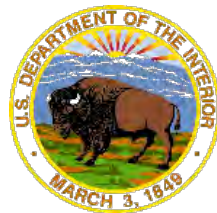
- Oil/gas, marine minerals (e.g., sand and gravel)
- Renewable energy (leases, easements, rights-of-way)
- Alternate use of existing OCS facilities



OCS jurisdictional boundary typically 3-200 nautical miles from coastline

BOEM has no jurisdiction within:

- National Park System
- National Wildlife Refuge System
- National Marine Sanctuary System
- Any National Monument



Wind



Ocean Current*



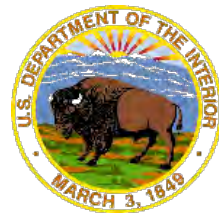
Wave*



Transmission



**BOEM is responsible for leasing areas of the OCS for ocean current and wave energy projects, and FERC regulates and issues licenses for construction and operation.*



DOI/FERC Memorandum of Understanding (April 2009)

- BOEM oversees marine and hydrokinetic (MHK) leasing on the OCS and conducts related NEPA analyses
- FERC licenses MHK project operations and conducts related NEPA analyses

Guidelines for potential OCS MHK developers

- Completed August 2009 and revised in July 2012
- <http://www.boem.gov/National-and-Regional-Guidelines-for-Renewable-Energy-Activities/>



Oregon (Task Force established in 2010)

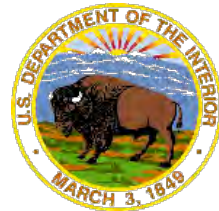
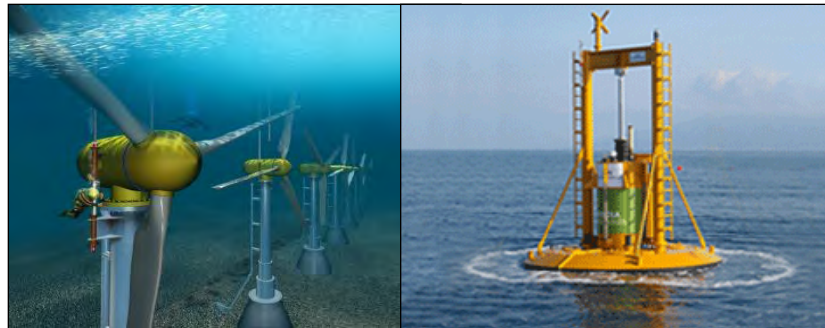
- Pacific Marine Energy Center-South Energy Test Site (PMEC-SETS) with Oregon State University

California

- Interest offshore with the CalWave Project proposal from California Polytechnic State University

Florida (Task Force established in 2014)

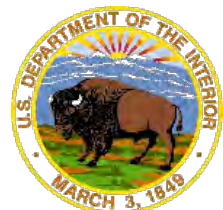
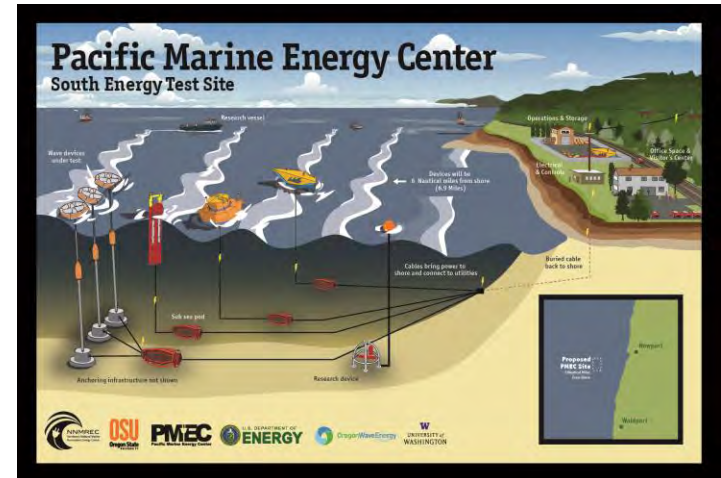
- Ocean current testing with Florida Atlantic University

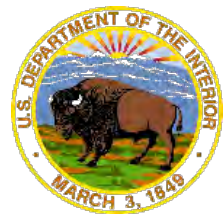
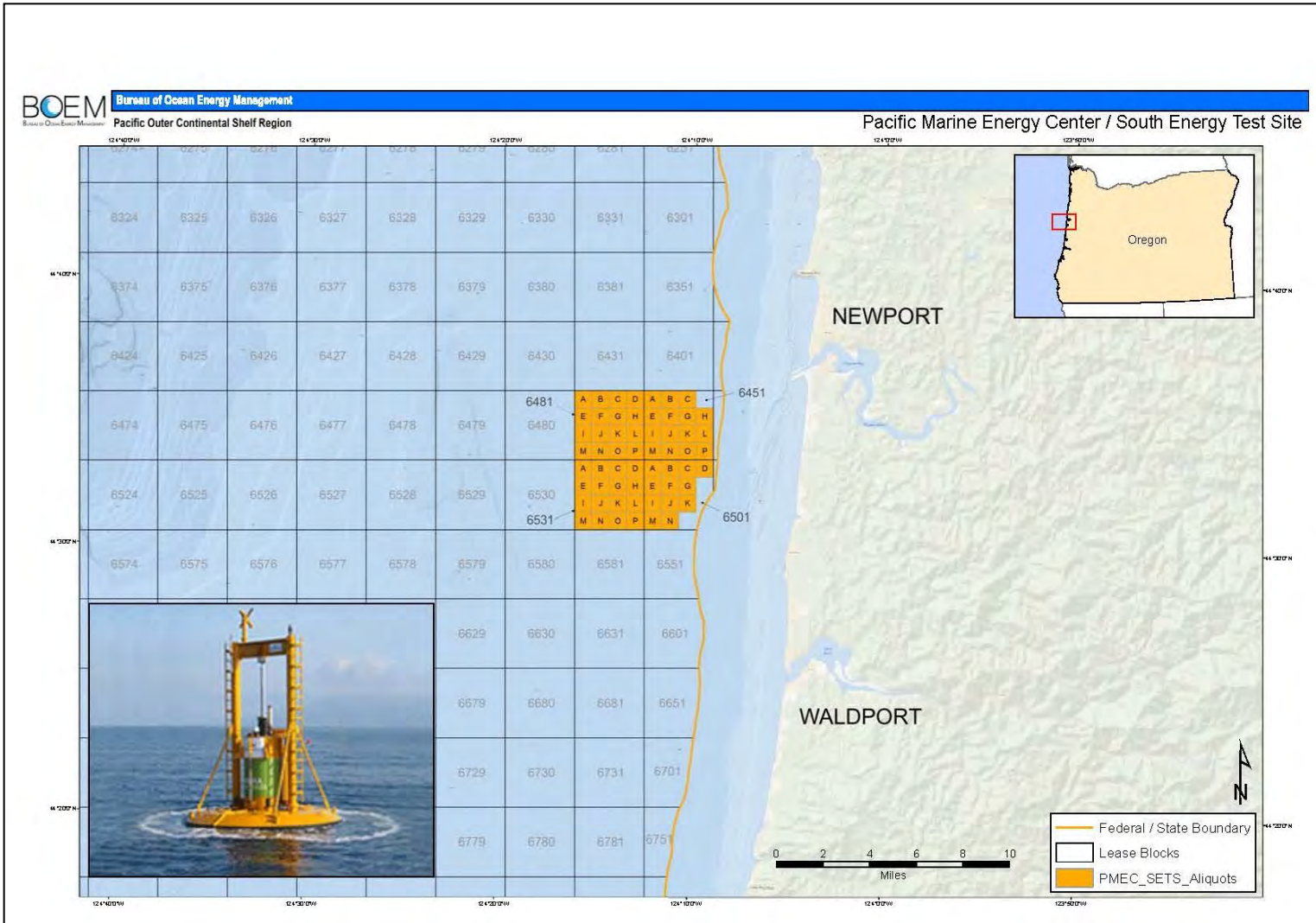


Northwest National Marine Renewable Energy Center, Oregon State University

Project Highlights:

- 4 berths, 20 MW capacity
- Marine hydrokinetic research and testing facility
- ~5 nautical miles offshore Newport, Oregon
- BOEM is a member of the Collaborative Working Group established for the project
- FERC is lead agency for environmental analysis, BOEM is cooperating agency

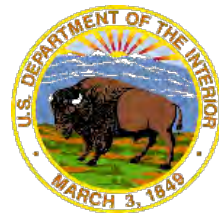
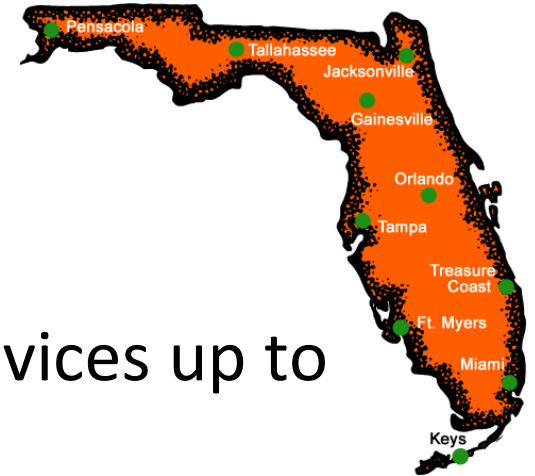




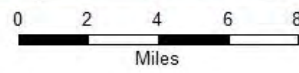
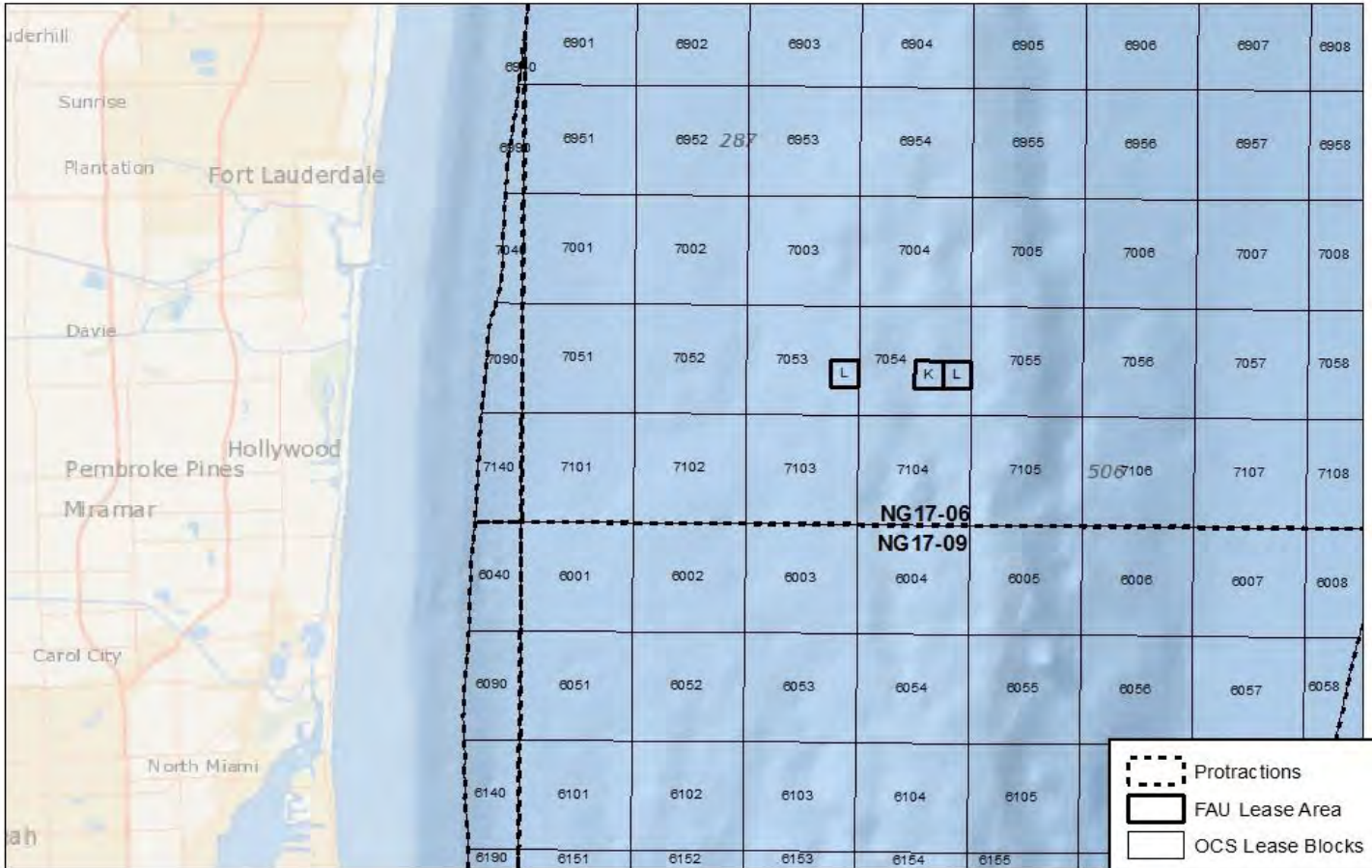
Southeast National Marine Renewable Energy Center, Florida Atlantic University




Project Highlights:

- Ocean current testing location for devices up to 100-kW and 7 meter rotor diameter
- ~15 nautical miles offshore Fort Lauderdale, Florida
- No FERC involvement since not connected to electrical grid
- BOEM executed lease effective June 1, 2014



Florida FAU Lease Area



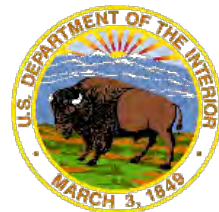
-  Protractions
-  FAU Lease Area
-  OCS Lease Blocks

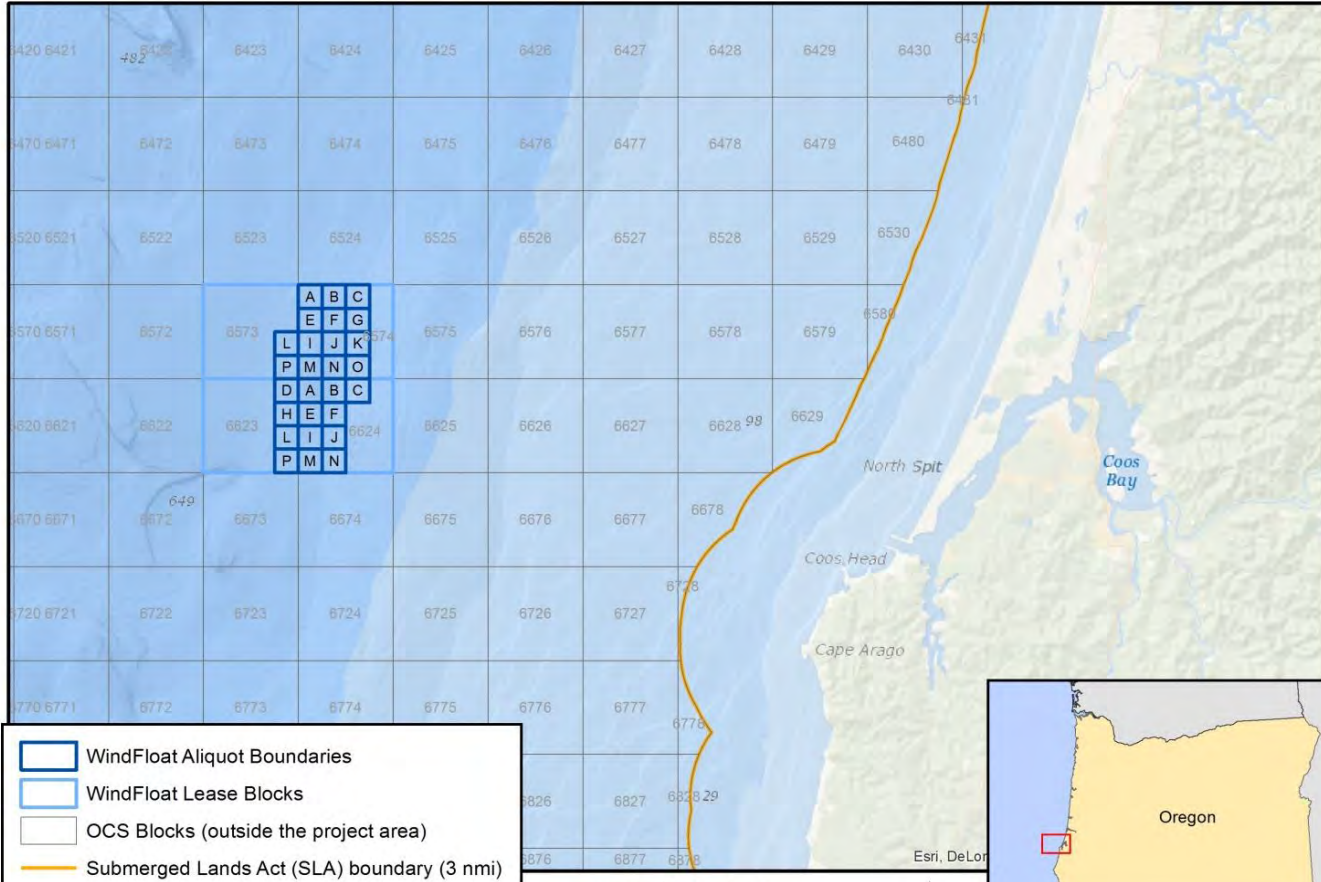


**WindFloat Pacific Project,
Principle Power, Inc.**

Project Highlights:

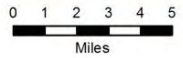
- 5 turbines, 6 MW each
- Floating foundation in > 1,200 feet water depth
- ~16 nautical miles offshore Coos Bay, Oregon
- Department of Energy (DOE) awarded funding for project to demonstrate technology
- Proposed to be operational by the end of 2017





- WindFloat Aliquot Boundaries
- WindFloat Lease Blocks
- OCS Blocks (outside the project area)
- Submerged Lands Act (SLA) boundary (3 nmi)

Base Map = NOAA Raster Nautical Charts (RNC) MapService
NAD 83 UTM Zone 10 N
Date: 4/30/2015 Document Path: H:\GIS\Maps\Oregon\WfdFloat.mxd





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