



Offshore Energy Development

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Oil and gas, wind, and marine mineral mining all have environmental impacts.



Large

G
E
O
G
R
A
P
H
I
C

A
R
E
A

Small

5 Year Program National EIS

Lease Sales EIS
(Multi and Single)

Exploration Plans

Development
Plans

Operations

Mitigation includes:

- Avoiding impacts
- Minimizing impacts
- Rectifying impacts through restoration
- Compensating for the impact



Renewable Energy Program

- **Wind Float Pacific Project offshore of Coos Bay, Oregon**
- **Pacific Marine Energy Center South Energy Test Site offshore of Newport, Oregon**



Five-Year Oil and Gas Lease Program for 2012 to 2017

- **No lease sales proposed**
- **The Pacific OCS Region presently has 43 active leases in production from 23 platforms.**
- **Most recent lease sale: 1984**

No pending mineral resource projects in the Pacific Region

Gulf of Mexico: Oil and Gas Leasing 2012-2017

**BOEM Gulf of Mexico OCS Region
Blocks and Active Leases by Planning Area
April 1, 2014**



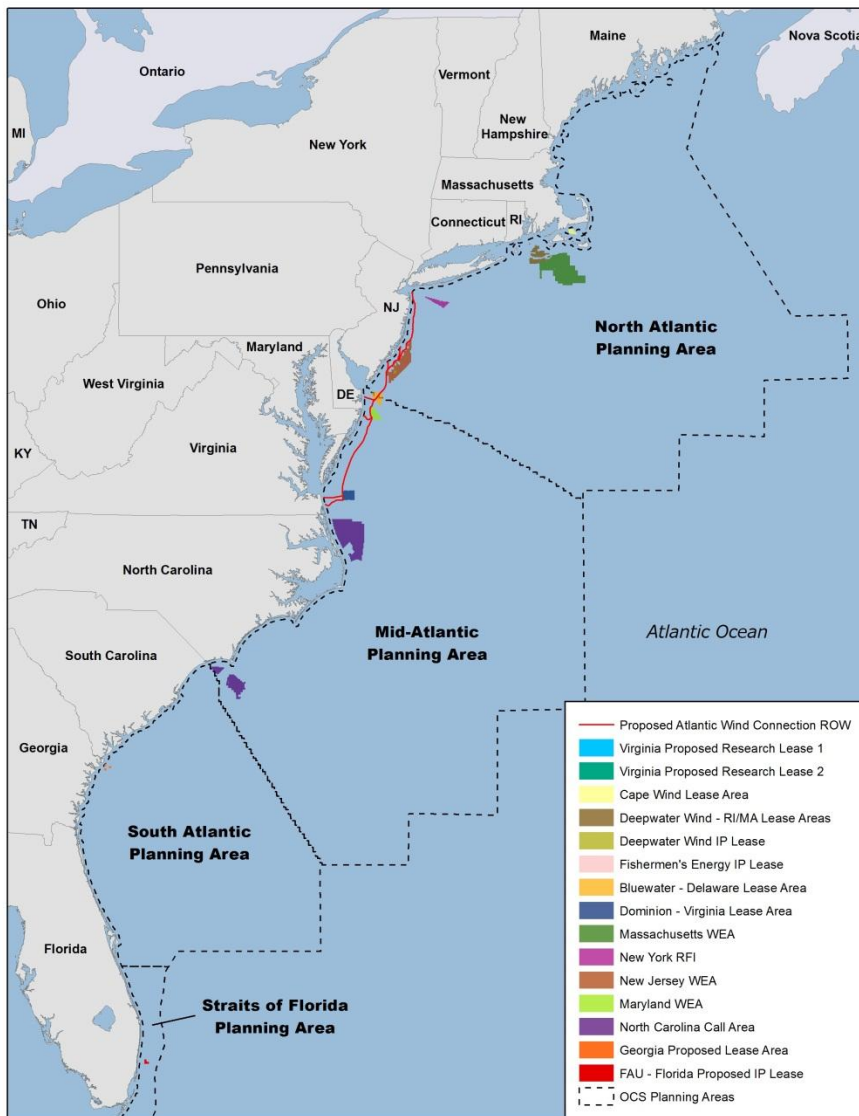
Western GOM: 5 lease sales beginning in 2012

Central GOM: 5 lease sales beginning in 2013

Eastern GOM: 2 lease sales in 2014 and 2016

OCS Areas with Significant Sediment Resources Highlighted in Red

No pending Renewable Energy Projects in the GOM



BOEM held its first two offshore wind lease sales in 2013:

- Rhode Island/Massachusetts - 2 leases issued to Deepwater Wind
- Virginia - 1 lease issued to Dominion Virginia Power

BOEM is currently deciding whether to permit seismic surveys for O&G in the mid- and south Atlantic planning areas

BOEM permits mineral resource use in the OCS, primarily dredging for coastal restoration

- Sperm Whale Acoustic Prey Study (SWAPS)
- Improving Cetacean Electronic Data Loggers
- Opportunistic Study of Hearing in Sea Otters
- Sperm Whales and their Response to seismic exploration in the GOM (SWSS)
- Characterization and Potential Impacts of Noise Producing Construction and Operation Activities on the OCS (Parts I and II)
- Evaluating Acoustic Technologies to Monitor Aquatic Organisms at Renewable sites
- Pressure Wave and Acoustic Properties Generated by the Explosive Removal of Offshore Structures



- Marine Mammal and Seabird Surveys of Potential Alternative Energy Sites Offshore Northern California, Oregon, and Washington
- Describing Biologically Significant Marine Mammal Behavior (NOPP)
- COMIDA: Factors Affecting the Distribution and Relative Abundance of Endangered Whales
- Demography and Behavior of Polar Bears Summering onshore in Alaska
- A Marine Biogeographic Assessment of the Main Hawaiian Islands
- Sperm Whales and Bottlenose Dolphins in the GOM
- Pacific Regional Ocean Uses Atlas



Recent Workshops and Partnerships

- *Workshop: Marine Mammals and Sound, 2010 (BOEM, NOAA and Navy)*
- *Workshop - Science Foundations for Ocean Planning in Hawaii: Human Use and Habitat Characterization, 2012*
- *Workshop - Quieting Technologies for Reducing Noise during Seismic Surveying and Pile Driving Workshop, 2013*
- DOI/DoD MOU on Renewable Energy and Renewable Energy Partnership Plan-Offshore Wind Energy Plan
- BOEM/FERC MOU on Renewable Energy Hydrokinetic Installations Pacific Region
- OCS Renewable Energy Task Forces: Hawaii, Oregon, and Atlantic





Phase I Study Summary: 2010 – 2015

- Conducted broad scale surveys
- Developed spatially explicit models
- Tagged loggerhead sea turtles

Phase II Study Objectives: 2015 - 2019

- Continue core survey work
- Integrate and cross-validate fine-scale and broad-scale survey results
- Tag seabirds, cetaceans and seals
- Incorporate passive acoustic survey and large whale monitoring efforts
- Analytical and modeling results from the first phase of AMAPPS will inform which topics to prioritize during the next 5 year phase

- Address integrated **ecosystem dynamics & monitoring** through coordinated **observational & modeling** efforts
- Focus on the **Beaufort Sea**
- Facilitate the incorporation of **technological innovations** through **TFORT**
- Aligns with the National Ocean Policy, the Interagency Arctic Research Policy Committee's 5-year research priorities and USGS report recommendations





Source: Photographer: Raymond VanBuskirk, NOAA NMFS AFSC NMML, NMFS Permit No. 14245, Funded by BOEM.