

OFFSHORE RENEWABLE ENERGY SESSION 1B

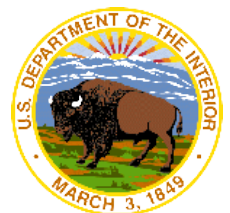




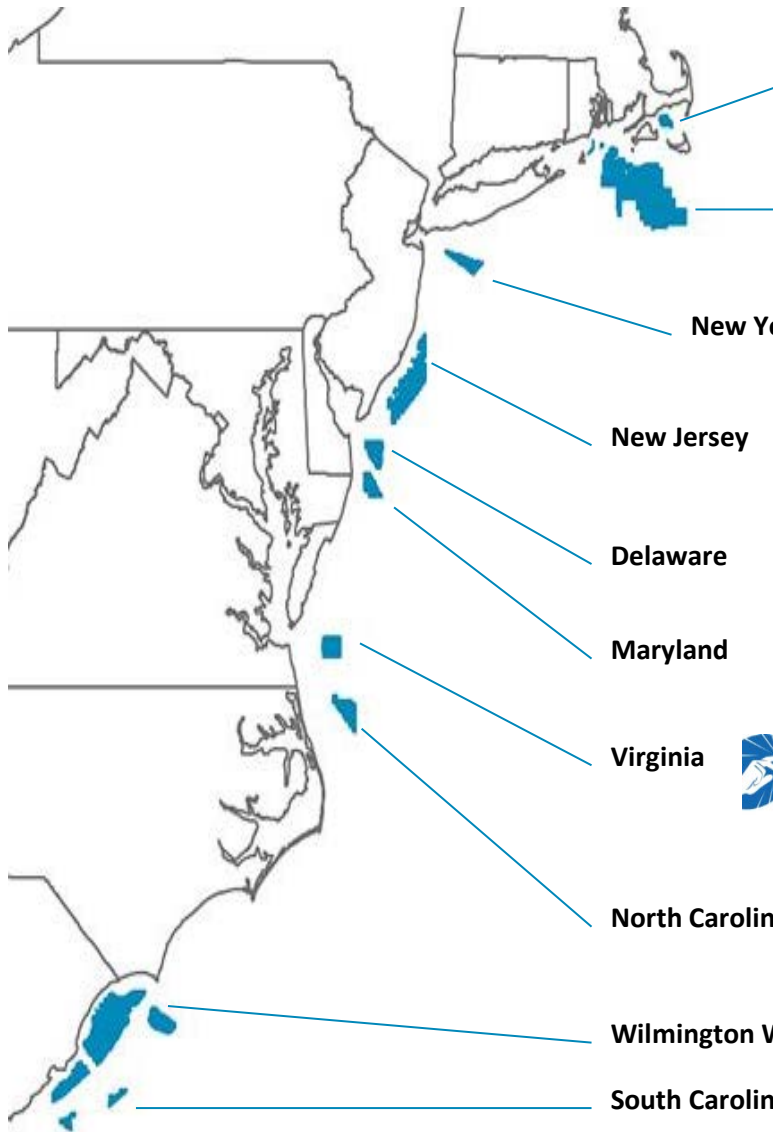
Offshore Renewable Energy Session 1B

Welcome and Introduction

Michael Celata
Regional Director
Gulf of Mexico Region
Bureau of Ocean Energy Management



Atlantic Commercial Leases To Date



Massachusetts

Rhode Island/Massachusetts

New York

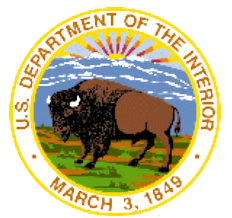
New Jersey

Delaware

Maryland

Virginia

North Carolina

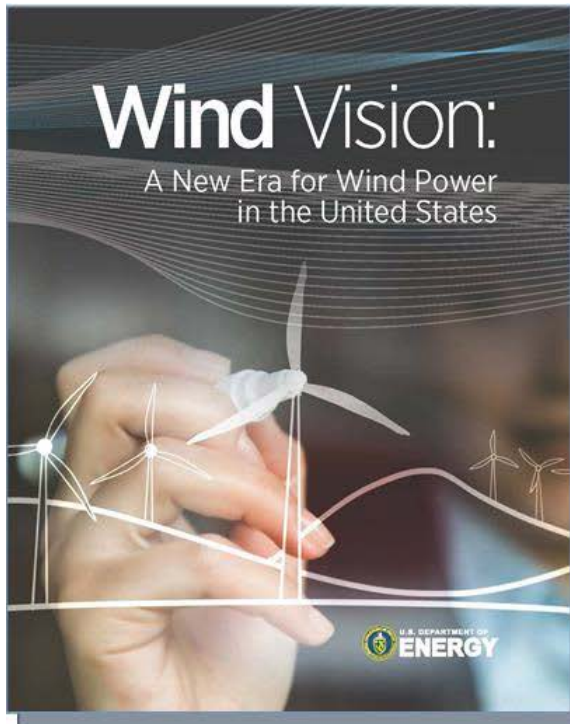


- BOEM funds and partners on renewables research related to:
 - Offshore Wind
 - Ocean Wave Energy (Hydrokinetic)
 - Ocean Current Energy (Hydrokinetic)
- Environmental Studies Program primarily funds *Baseline, Fates & Effects, and Monitoring Studies*
- >40 years of biological, physical, and social science research in the Gulf
- BOEM also partners with BSEE to fund research through the Technology Assessment Program

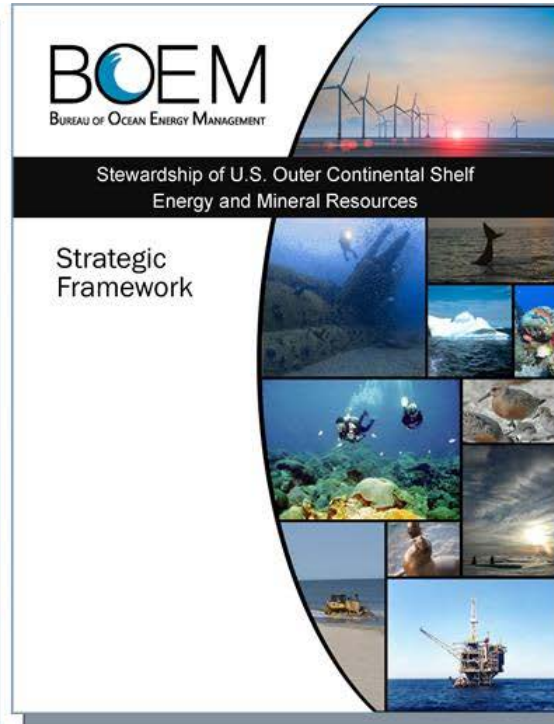




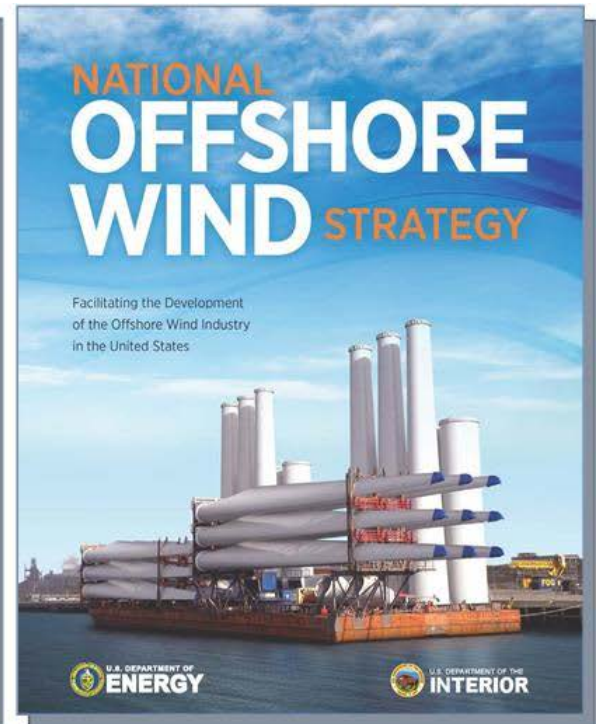
Federal Government Renewable Energy Goals and Collaboration



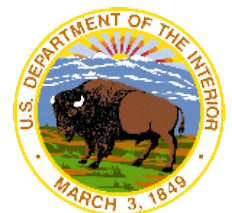
March 2015



March 2016



September 2016





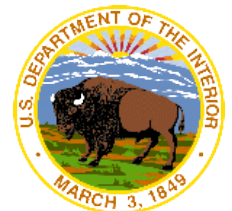
Protected Species Observations

Assessing Broad-Scale Abundance and Distribution of Marine Mammals, Sea Turtles, and Seabirds in the Gulf of Mexico:

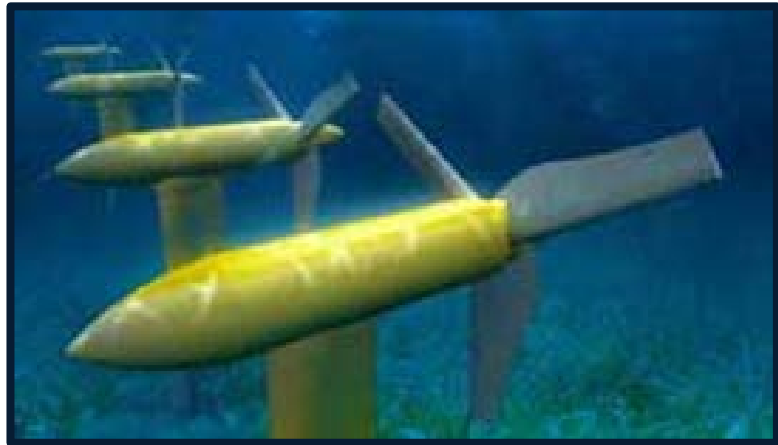
GoMMAPPS Field Program



Gulf of Mexico Marine Assessment Program for Protected Species



Gulf of Mexico Feasibility Study



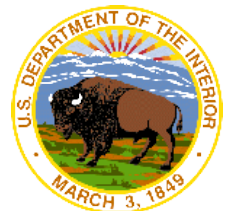
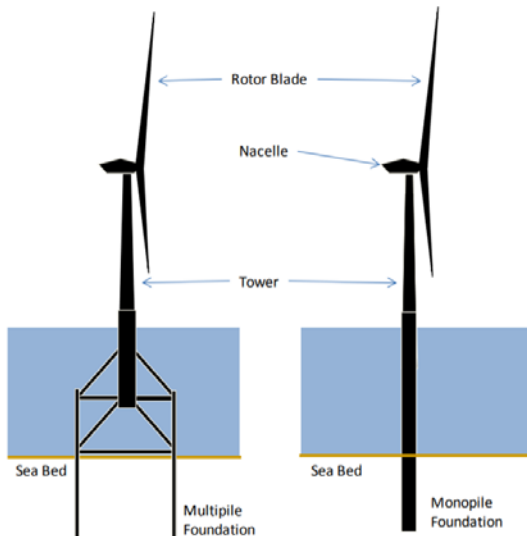
- New study with NREL to inform Gulf Region’s strategic planning.
- “Offshore Renewable Energy Feasibility Study Across Technology Types for U.S. GoM”
- Tasks involve:
 - Survey of technologies
 - Regional Techno-Economic Modeling
 - Site-specific analysis
 - Jobs and economic development
 - Outreach materials
- Opportunity for coordination between federal, state, and local governments.

Turbine Designs and Standards

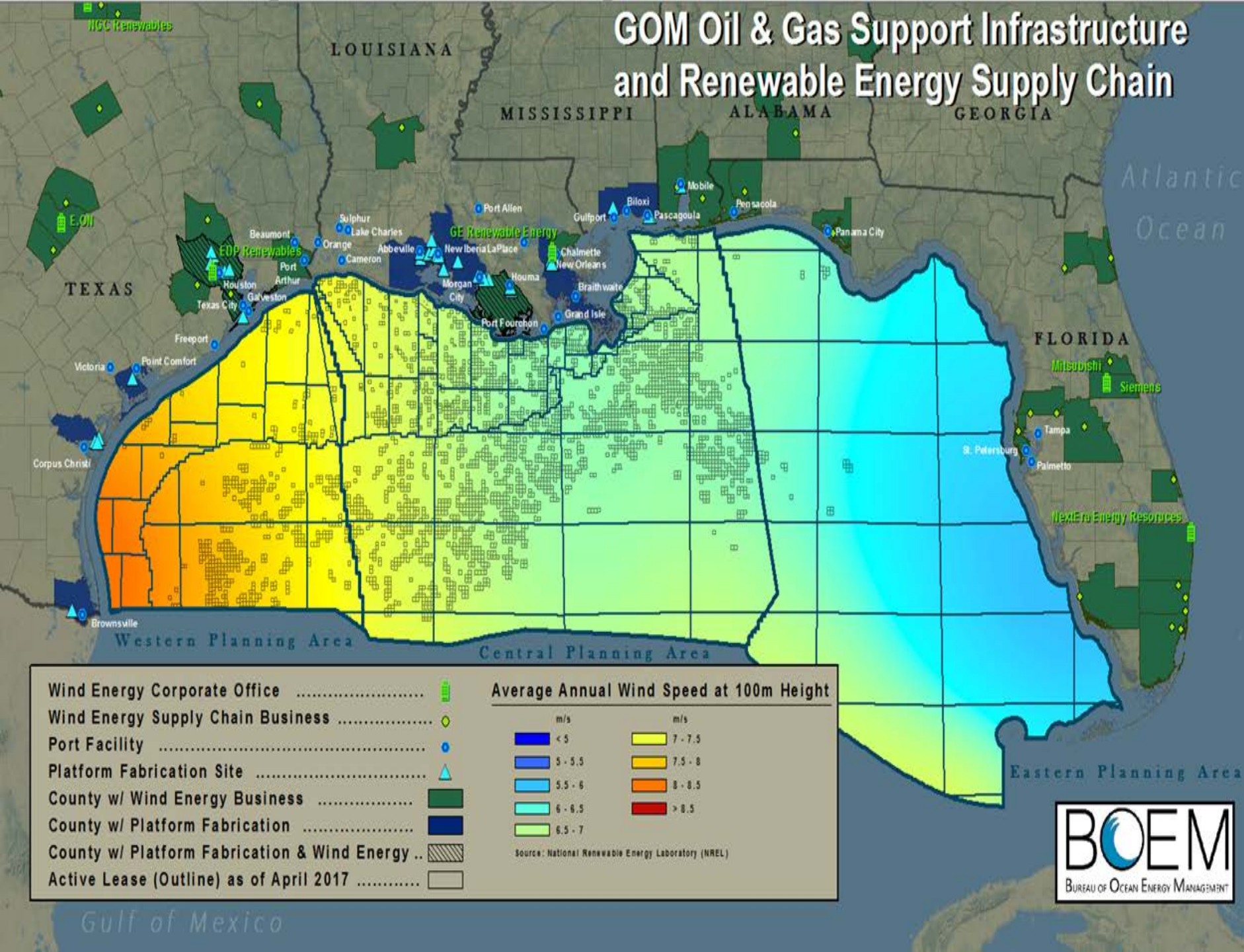


Source: <http://www.class.noaa.gov/>

- BOEM has a history of ensuring offshore wind turbines are designed to withstand extreme weather events, including hurricanes.
- Turbines are currently designed to withstand extreme weather events based on a target reliability, similar to the Oil and Gas industry.
- BOEM/BSEE continue efforts to help develop new structural safety standards for offshore wind turbines based on better understanding natural phenomenon.
- Recently sponsored two workshops for the development of design standards, leading to recommendations for moving forward.



GOM Oil & Gas Support Infrastructure and Renewable Energy Supply Chain



Wind Energy Corporate Office		Average Annual Wind Speed at 100m Height	
Wind Energy Supply Chain Business		m/s	m/s
Port Facility			
Platform Fabrication Site			
County w/ Wind Energy Business			
County w/ Platform Fabrication			
County w/ Platform Fabrication & Wind Energy			
Active Lease (Outline) as of April 2017			

Source: National Renewable Energy Laboratory (NREL)



THANK YOU!

