



**BOEM** Bureau of  
Ocean Energy Management

# BOEM Synergies with the OOI Pioneer Array

8 December 2021

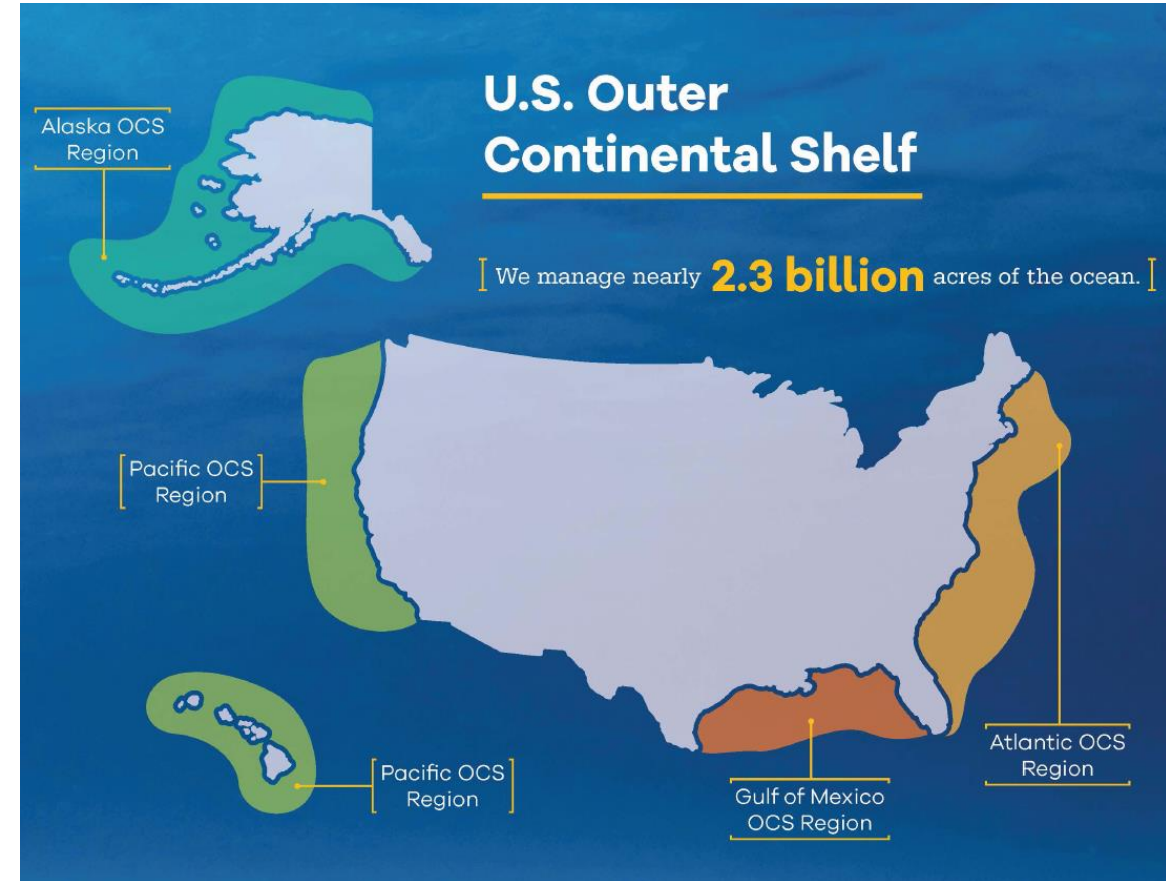
Thomas Kilpatrick | OOIFB Fall Meeting



Photo: Virginia Business

# BOEM's mission is to steward U.S. offshore energy resources

- BOEM's mission is to manage development of US outer continental shelf energy and mineral resources in an environmentally and economically responsible way.
- Offshore wind energy is expanding rapidly, promising to reduce US greenhouse gas emissions while supporting economic and job growth  
(Goal: 30 GW offshore wind power by 2030).



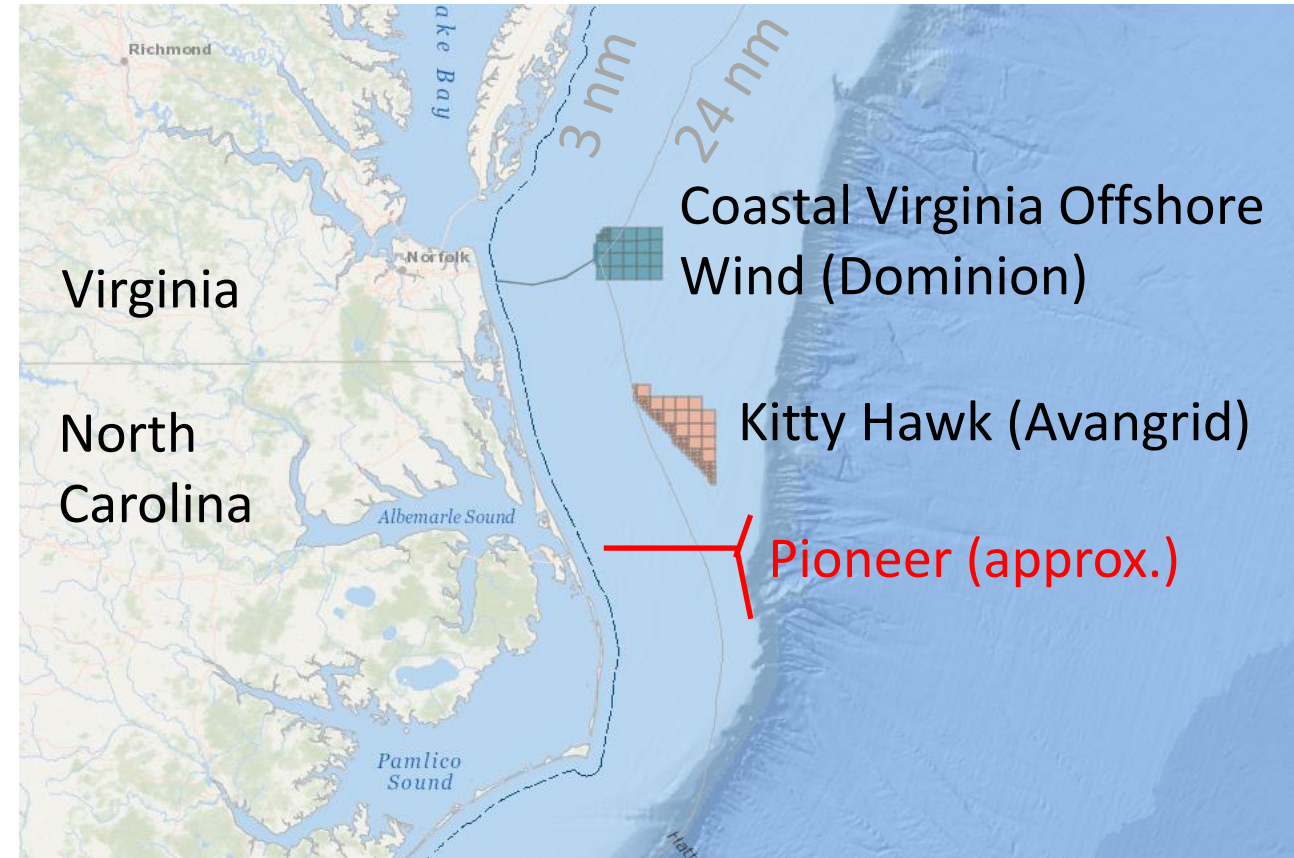
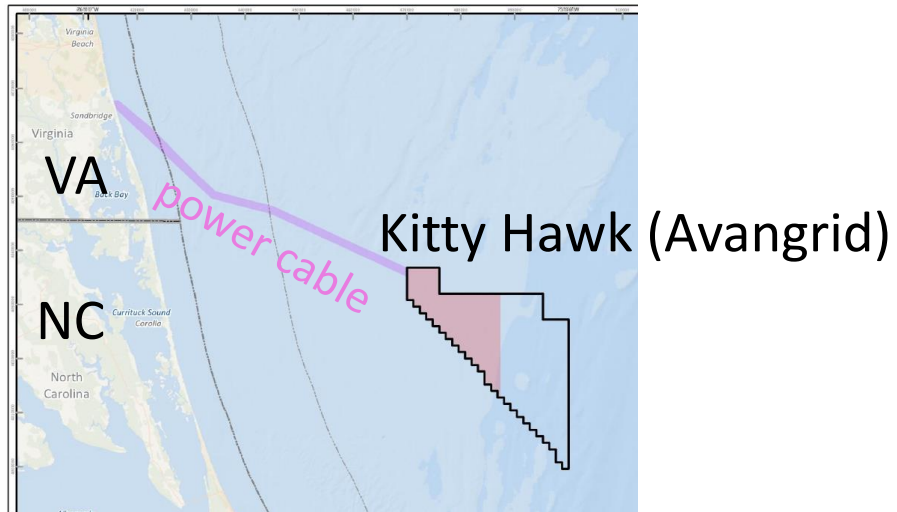
BOEM's jurisdiction = outer continental shelf





# What's new with Virginia and Kitty Hawk sites

- Construction Operation Plans (COPs) released summer 2021. Now preparing EIS.
- CVOW site will have up to 205 turbines; Avangrid site will have up to 69 turbines.
- Power cable locations announced.

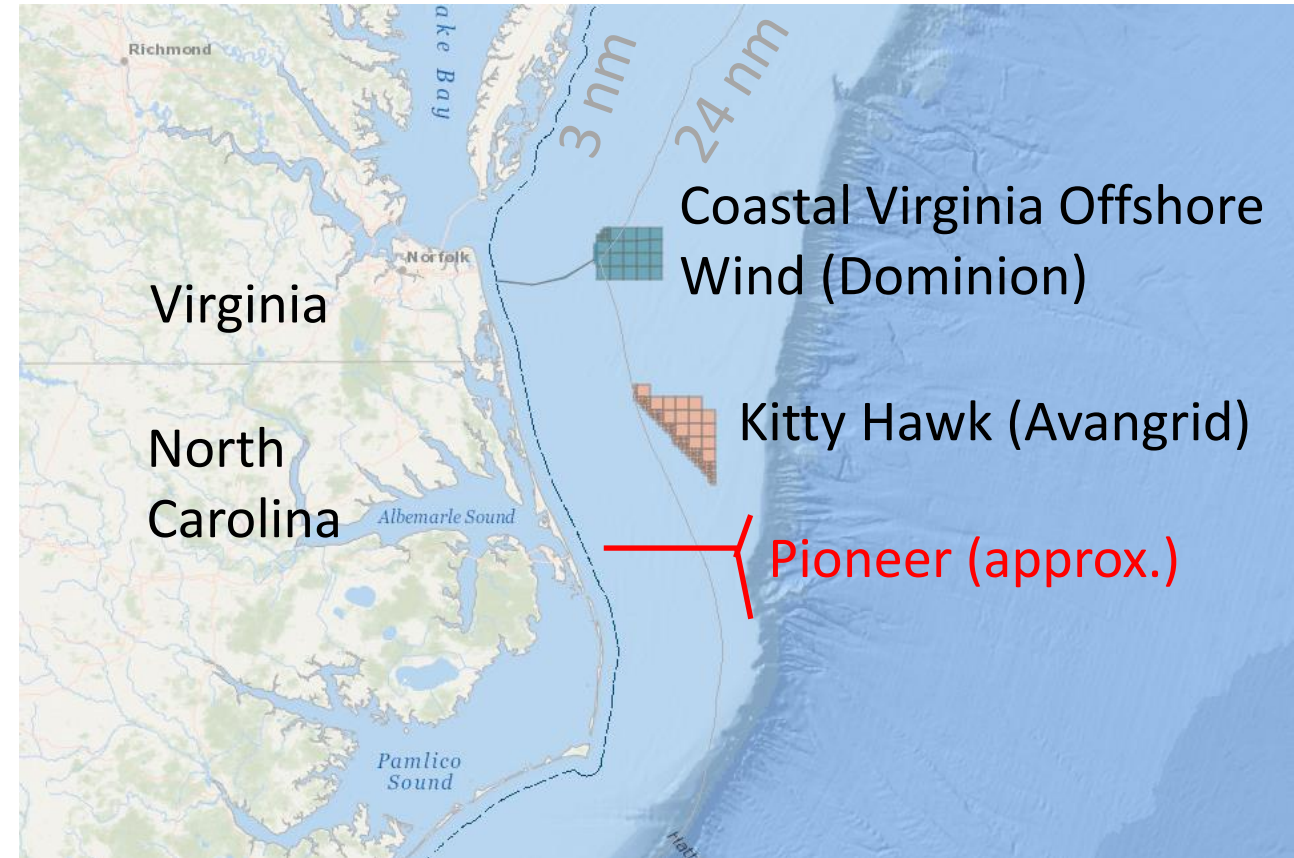


Kitty Hawk and Dominion lease sites are in range of Pioneer mobile assets ([marinecadastre.gov](https://marinecadastre.gov))



# What are the impacts of wind turbines on the marine environment?

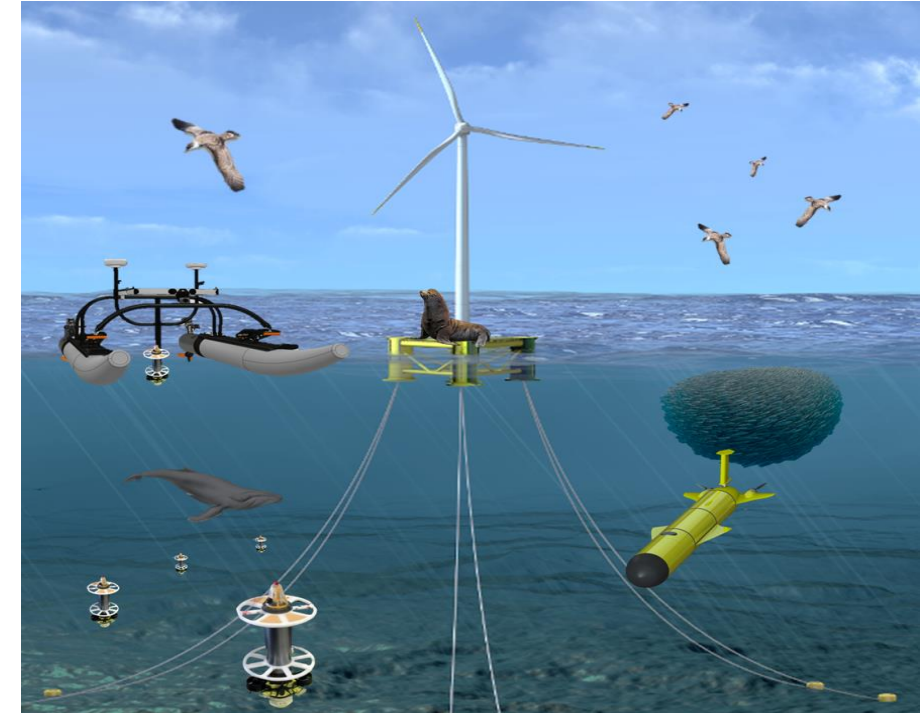
- BOEM's science interests include the impact of wind turbines on the physical circulation ( $\Delta\tau$ , hull wake effects) and biogeochemistry, and resulting impacts on fish and marine mammals.
- BOEM is keen to partner with OOI, particularly for mobile assets with coverage of the CVOW & Kitty Hawk lease sites.





# Offshore wind env. monitoring will look beyond physical variables

- DOE & BOEM recently announced jointly funded awards for research to support offshore wind.
- Emphasis on monitoring of marine mammals; bird/bat; and fisheries.
  - Technology includes passive acoustic monitoring, tags, remote sensing.

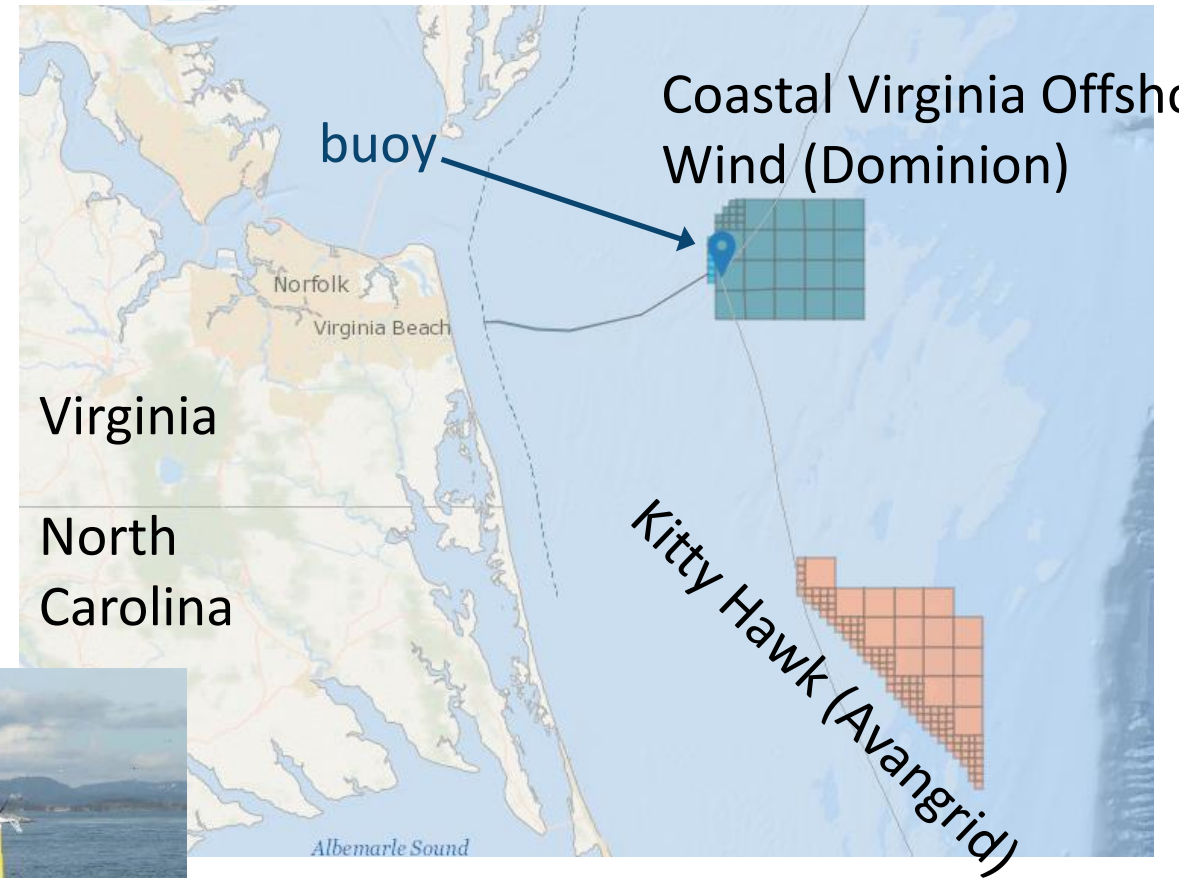


*(from R. Camilli, WHOI)*

DOE Announces  
**\$13.5M** for Sustainable  
Development of  
Offshore Wind

# Operators have been collecting metocean obs as part of SAP

- Dominion and Avangrid collect meteorological and oceanographic observations from a buoy as part of the Site Assessment Plan (SAP).
- Includes LIDAR observations of wind profile to 200 m above sea level; air pressure & temperature; and ADCP.  
→ to my knowledge no biological obs
- Obs available from Apr 2019 for Dominion; from Jan 2020 for Kitty Hawk.



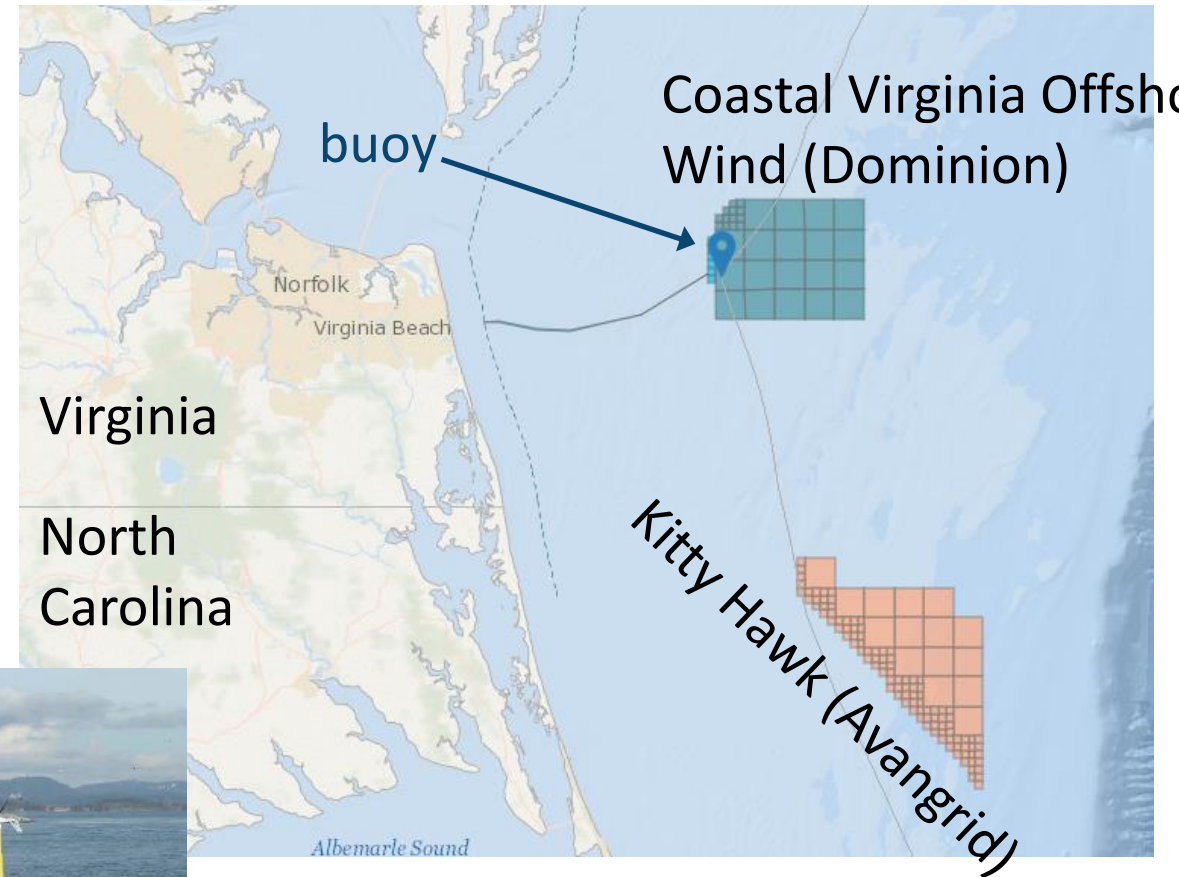
WindSentinel Metocean buoy (from Dominion SAP)





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- We will want to coordinate future obs with operators.



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