

BOEM Bureau of Ocean Energy Management

BOEM Update on NC/VA Projects

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Photo: Virginia Business

Status of NC and VA Offshore Wind Projects

- The Coastal Virginia Offshore Wind (CVOW) Pilot project completed installation of 2 turbines in June 2020.
- The CVOW Commercial project's Draft Environmental Impact Statement (DEIS) is under agency review and should be released for public comment in the coming months.
- Kitty Hawk North (NC) DEIS is mostly drafted. Kitty Hawk South (NC) COP is under review by BOEM.
- CVOW Commercial has proposed up to 205 turbines; Kitty Hawk North has proposed up to 69 turbines.



Kitty Hawk and CVOW projects are in range of Pioneer mobile assets (*marinecadastre.gov*)



BOEM Leasing Process



 $_{\odot}$ The NC and VA projects are in the NEPA Review stage

 After Final EIS and COP approval, final project design and installation plans will be reviewed by BOEM before construction can begin



Central Atlantic Call: Additional areas for wind energy leasing

- In April 2022, BOEM announced a Call for Information and Nominations to assess commercial interest in additional Central Atlantic sites.
- BOEM received nominations of areas of interest from 3 developers.
- BOEM is currently in the Area Identification process to narrow down areas for leasing.
- BOEM will be interested in baseline oceanographic monitoring for the areas (red dashed lines) identified in this recent call.





What science questions matter to BOEM?

- BOEM's science interests include the impact of wind turbines on the local/regional ocean circulation (Δτ, current drag from monopiles) and biogeochemistry, and resulting impacts on fish, marine mammals, and birds/bats.
- BOEM is keen to partner with OOI, particularly for:
 (1) mobile assets with coverage of the wind lease areas;
 (2) passive acoustic monitoring of marine mammals / fish;
 (3) eDNA.



Offshore wind farm impacts on North Atlantic Right Whales are a huge concern (*image:whales.org*)



Turbid ocean wakes in the lee of wind turbines off the English coast (*Forster 2018*).



Observations needed to constrain BOEM ocean modeling efforts

 BOEM has utilized flexible-mesh ocean modeling to assess the impact of offshore wind turbines on local/regional ocean circulation, and resulting effects on larval dispersal.



Wind wakes in the lee of wind farms off of California, used for ROMS simulations (*Raghukumar et al. 2022*).

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Flexible mesh grid for the southern New England region (Johnson et al., 2021)





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Operators have been collecting metocean obs as part of SAP

- Dominion and Avangrid collect meteorological and oceanographic observations from buoys 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.

 \rightarrow very limited spatial footprint; no biological obs

 Obs available from Apr 2019 for Dominion; from Jan 2020 for Avangrid.



WindSentinel Metocean buoy (from Dominion SAP)

