

March 6, 2020

Kitty Hawk Offshore Wind

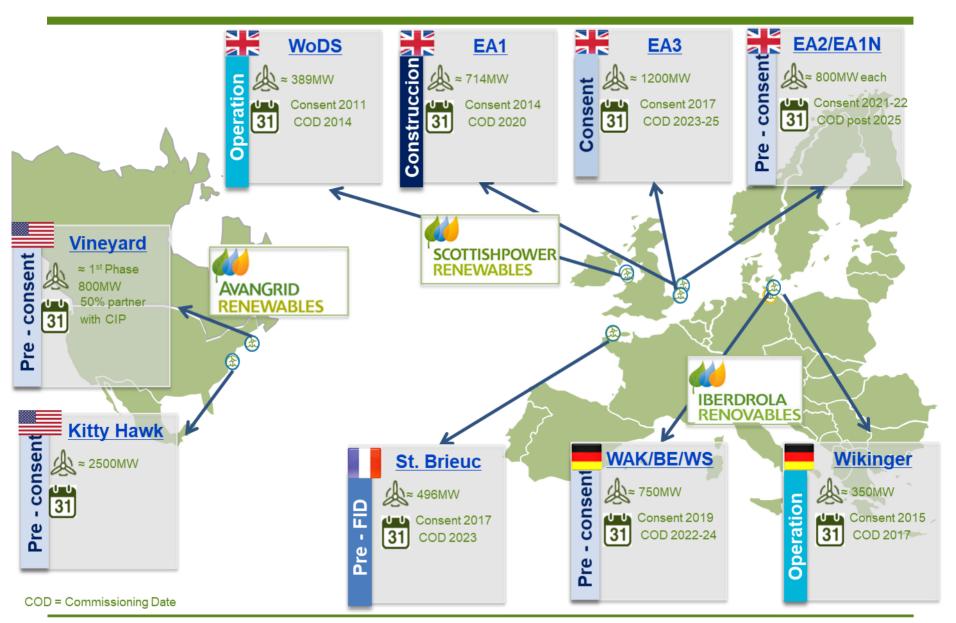
AVANGRID's Geographic Presence

- ~ \$32 billion in assets with a presence in 27 states 3rd largest wind operator in the U.S.
 - > 6 GW wind & solar in operation





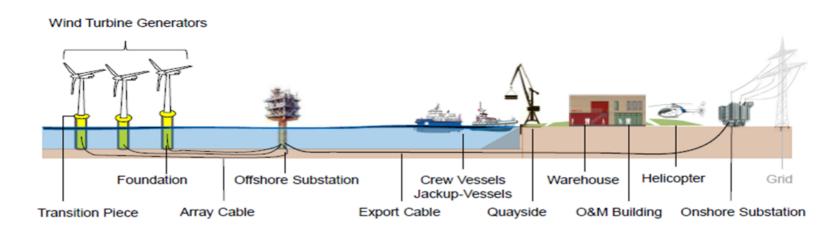
Offshore pipeline overview Iberdrola Group





Anatomy of an Offshore project

Complex power plants located far from shore

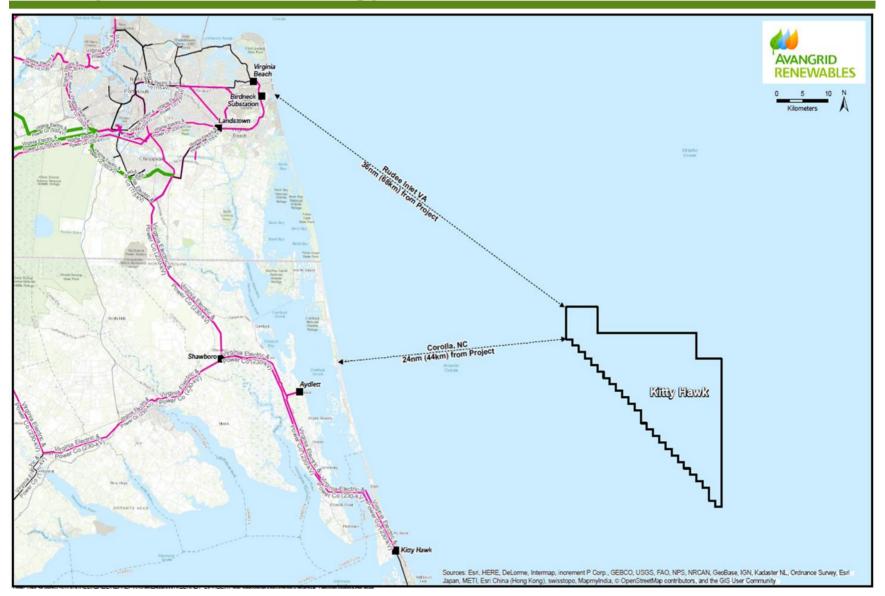


- Marine environment: sea waves, seabed mobility, corrosion, weather downtime
- Specific Health and Safety risks and requirements
- Huge scale of operations

Key technological decisions are taken 3 to 5 years before actually implemented

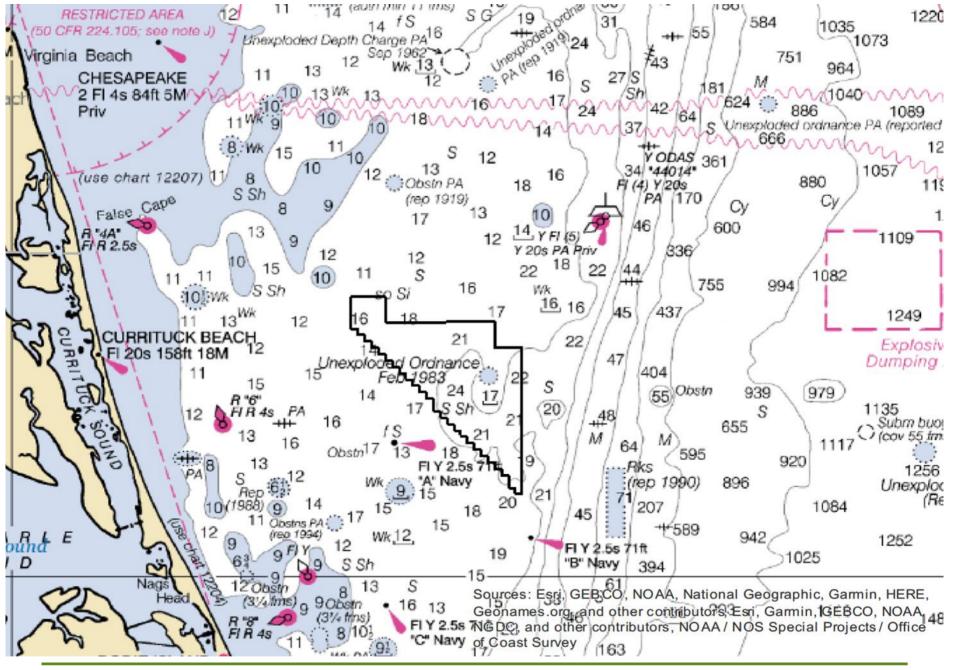


Kitty Hawk Wind Energy Area

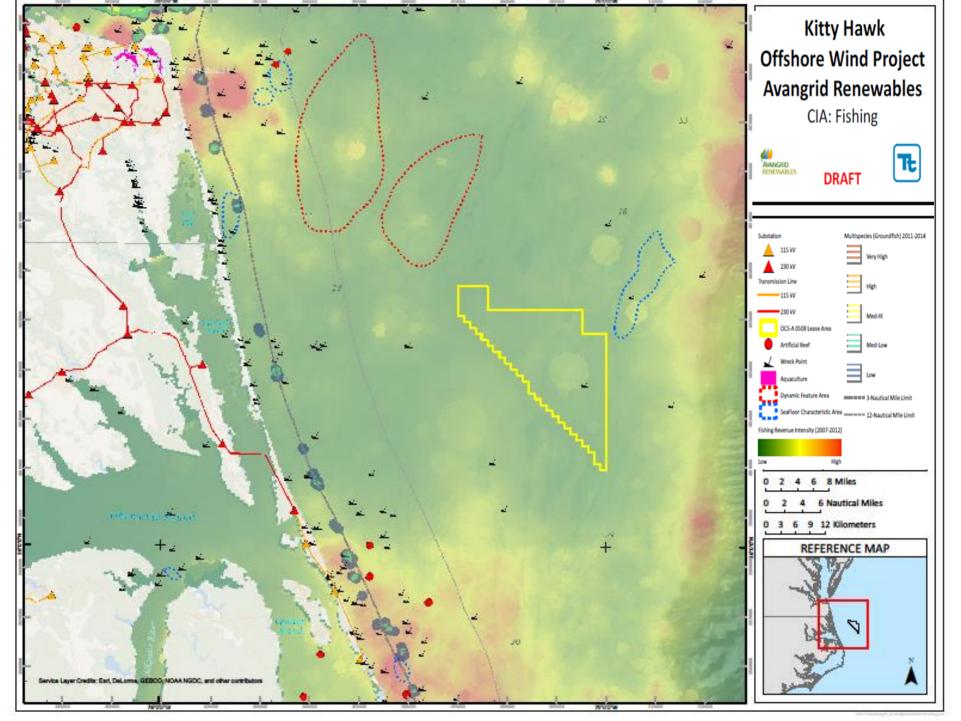












Planned activities offshore NC & VA

2018

Planning, assessment & stakeholder outreach

2019

Planning, assessment & stakeholder outreach

Aerial Surveys of wind energy area - Avian, Marine Mammals, Sea Turtles, Fish

Marine geophysical, geotechnical, & benthic reconnaissance surveys

SAP submittal

2020

Planning, assessment & stakeholder outreach

Aerial Surveys of wind energy area – Avian, Marine Mammals, Sea Turtles, Fish

Marine geophysical, geotechnical, & benthic surveys of potential project area(s) & cable routes

SAP Approval/Buoy deployment

Potential

2021-2022

Planning, assessment & stakeholder outreach

Project permitting

2023 Onshore construction

2024-2025 Offshore construction





Targeted Fisheries Outreach

Communications Network and Nodes

- > HMS Tournaments
- Marina Operators
- ➤ Regional Fishery Management Councils & Commission
- State Marine Fisheries Agencies (NC & VA)
- > NMFS HMS
- Commercial Fleet Owners/Operators
- Commercial Fishery Associations & Recreational Leaders

www.avangridrenewables.com

> NMFS RAs



Targeted Fisheries Engagement

Oral History Interviews

- > Description of historical fishing
- > Gear types and operating modalities
- > Seasonal movement of fish
- > Historical characterization and trends
- Ecological and environmental observations
- > Identification of other fisheries in the area

www.avangridrenewables.com

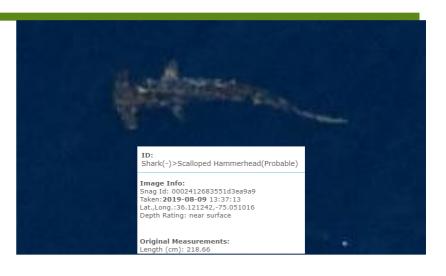




Future Fisheries Engagement

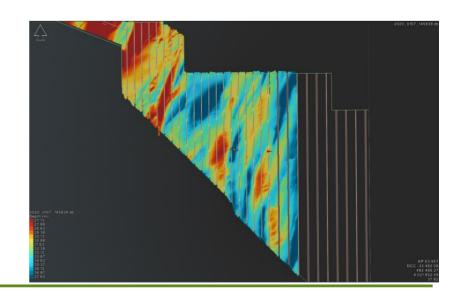
Developing Fisheries Baseline

- Characterizing fisheries transits
- Fisheries data requests-Federal/State
 - ➤ Fisheries independent data (e.g. Surveys)
 - ➤ Fisheries dependent data (e.g. VTR, NEFOP)



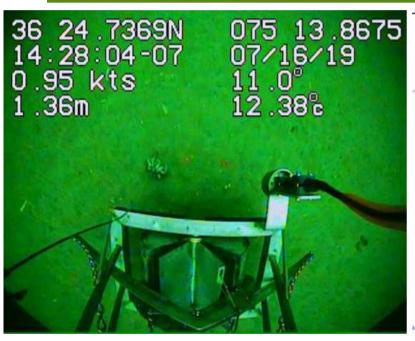
Ongoing Survey Work

Continued communication and coordination between survey vessels and fishing fleet





Benthic Grab Sampling



- Silty sand with medium to high compaction based on the SSS.
- Confirmed by the benthic grab sampling- fine sand (>96.5%)
- Total organic carbon was low, ranging from non detect to 3,400 mg/kg (0.34 percent).
- A total of 585 organisms were collected in BDA1, lowest practical taxonomic level (LPTL).
 - Primarily consisted of polychaete worms, amphipods, bivalves, and forams.
 - Species of anthropogenic importance observed included Atlantic rock crab, Atlantic jackknife clam, scallops, ocean quahog, and Atlantic surf clam.

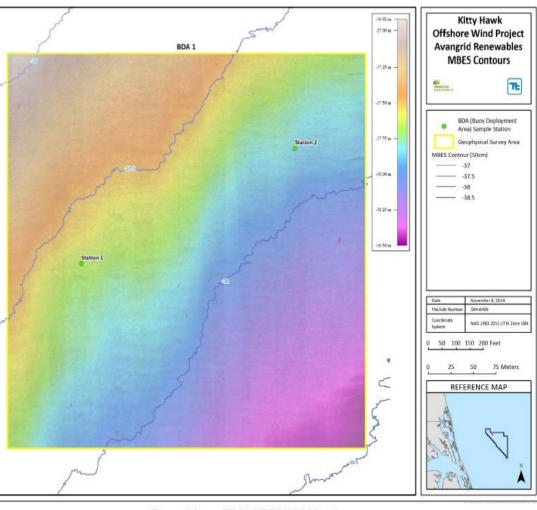


Figure 6-2 BDA1 MBES/SSS Mosaic



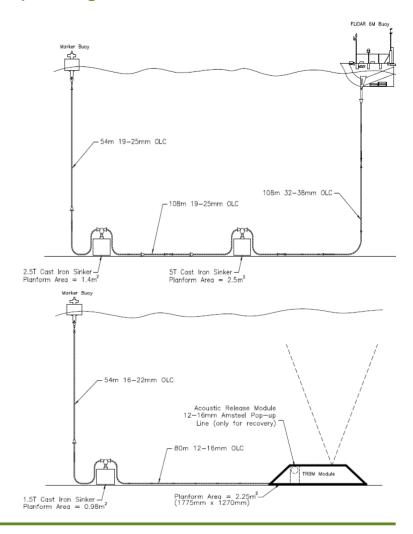


MetBuoy Deployment

- MetBuoy Deployment MAR/APR 2020, pending Site Assessment Plan approval
- Communication and coordination with the fleet operating in the area



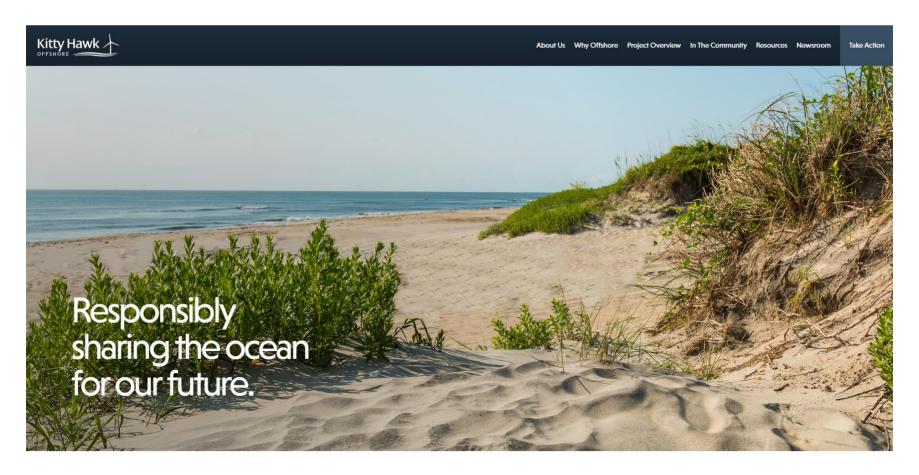








Project Updates



Updates available at www.avangridrenewables.com/kittyhawk
Preparing to launch new website in Q1 2020 at www.kittyhawkoffshore.com



Questions?

Craig Poff- Director of Development craig.poff@avangrid.com
610.230.0332

Brian Benito Jr.- Permitting Manger brian.benito@avangrid.com 503.382.0107

Rick Robins- Fisheries Liaison 757.876.3778 rick@fathomedgelimited.com

Dewey Hemilright- Fisheries Representative 252.473.0135



