



AVANGRID
RENEWABLES

June 2019

Kitty Hawk Offshore Wind

Avangrid Renewables

A collection of exceptional assets...

One of the largest wind project owners in the U.S. with more than 6 GWs owned and contracted

More than \$10 billion of U.S. assets at nearly 60 installed plants

750+ employees at the end of 2016, compared with 12 in 1999

636 MW of CCGT & peaking capacity on the strategic CA-OR border

Represents 39% of Iberdrola S.A.'s global wind capacity

US Renewables



Wind

6,000+ MW



Power

536 MW CCGT
100 MW peaking



Solar & Biomass

106 MW Solar
55 MW Biomass

And clean gas generation

...focused on operational excellence and selective growth

April 2017

Iberdrola Group

More than 48,000 MWs of installed capacity...

150-year history with roots in hydroelectric energy

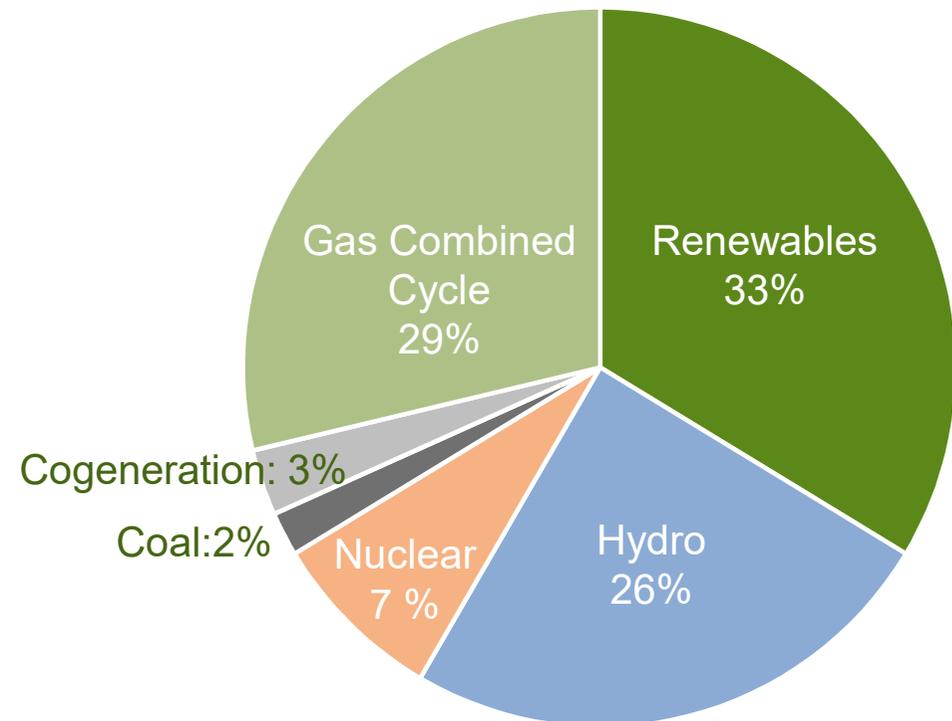
Leading renewables producer worldwide with around 16 GW installed

> 34,000+ employees in nearly 40 countries

One of the cleanest portfolios in the energy sector

Strategic focus on US, UK, Latin America and Spain

Energy Capacity*
(67% emissions free)

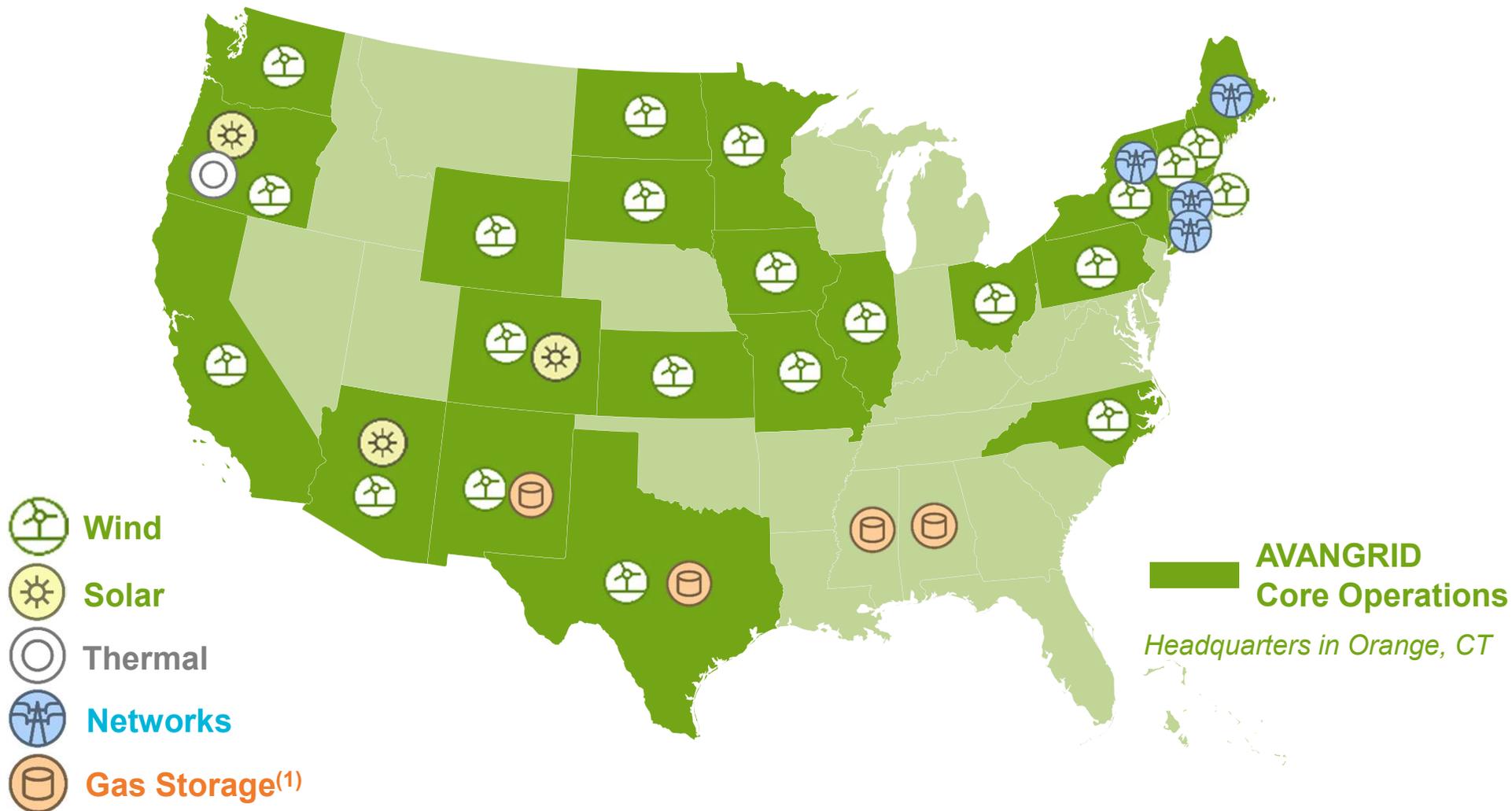


...that is flexible and economical

March 2017

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



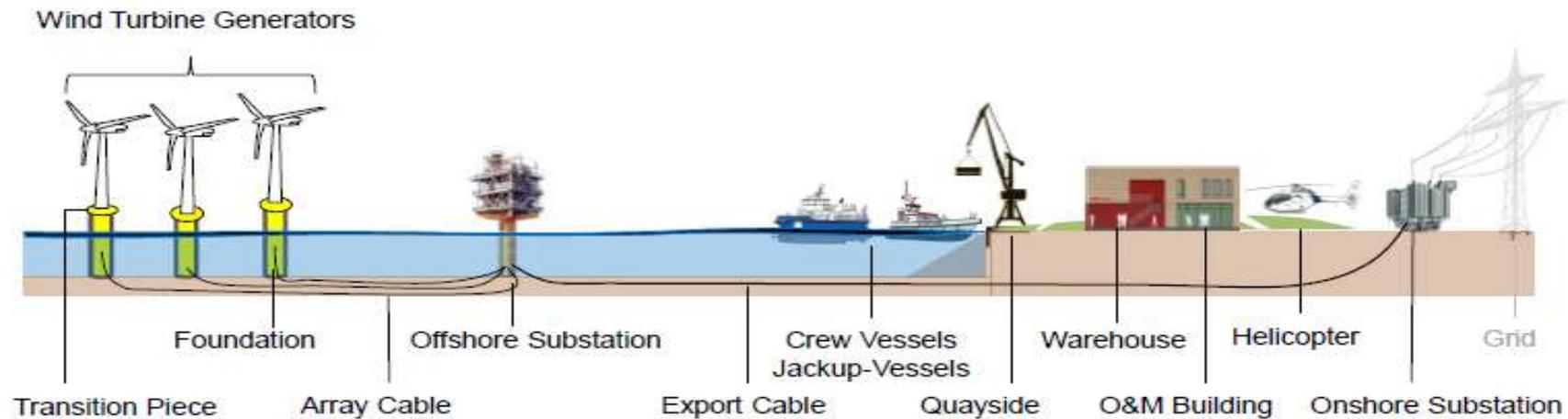
(1) Under strategic review

Iberdrola Group offshore wind pipeline overview



Anatomy of an Offshore project

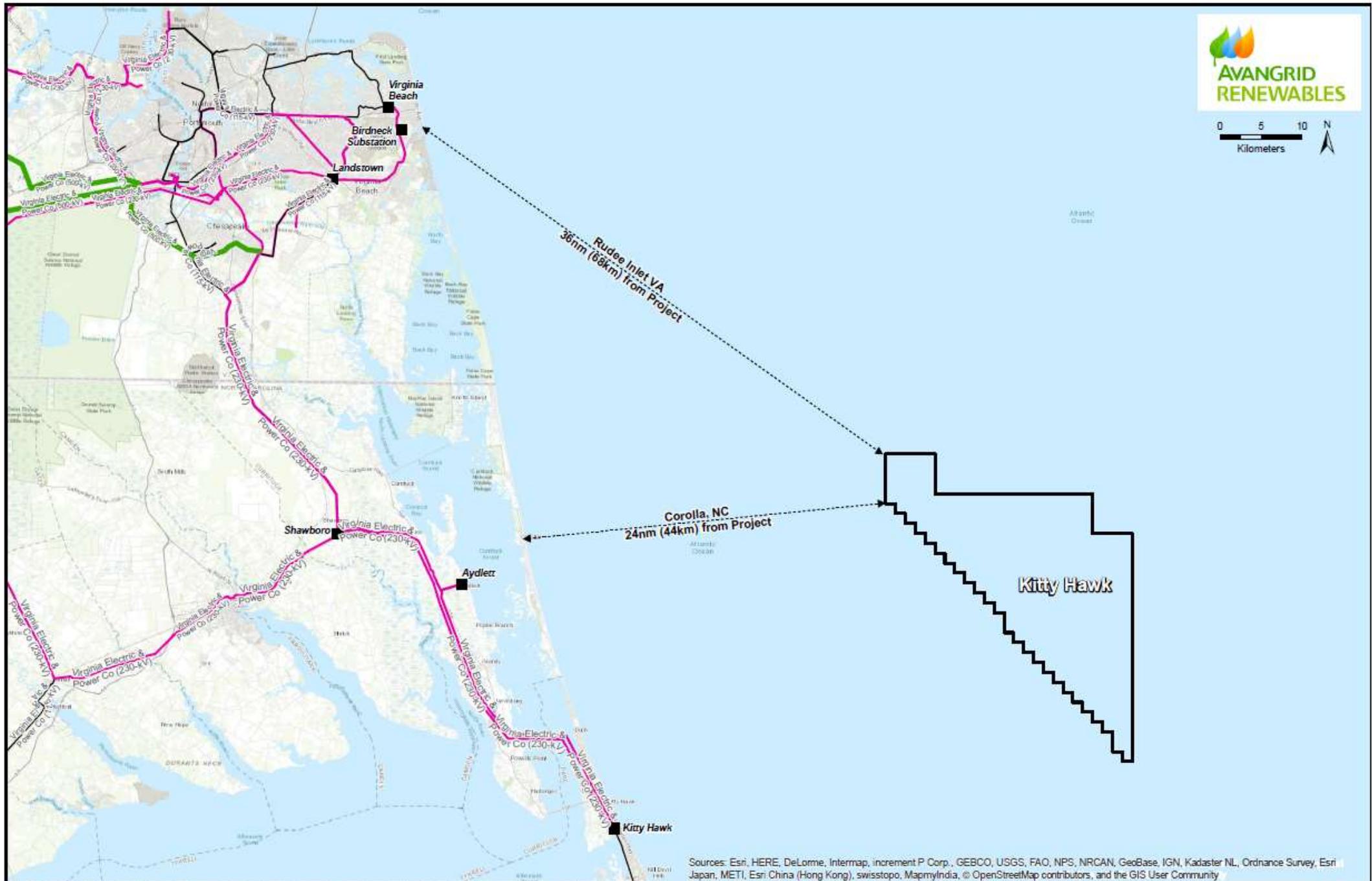
Complex power plants located far from shore

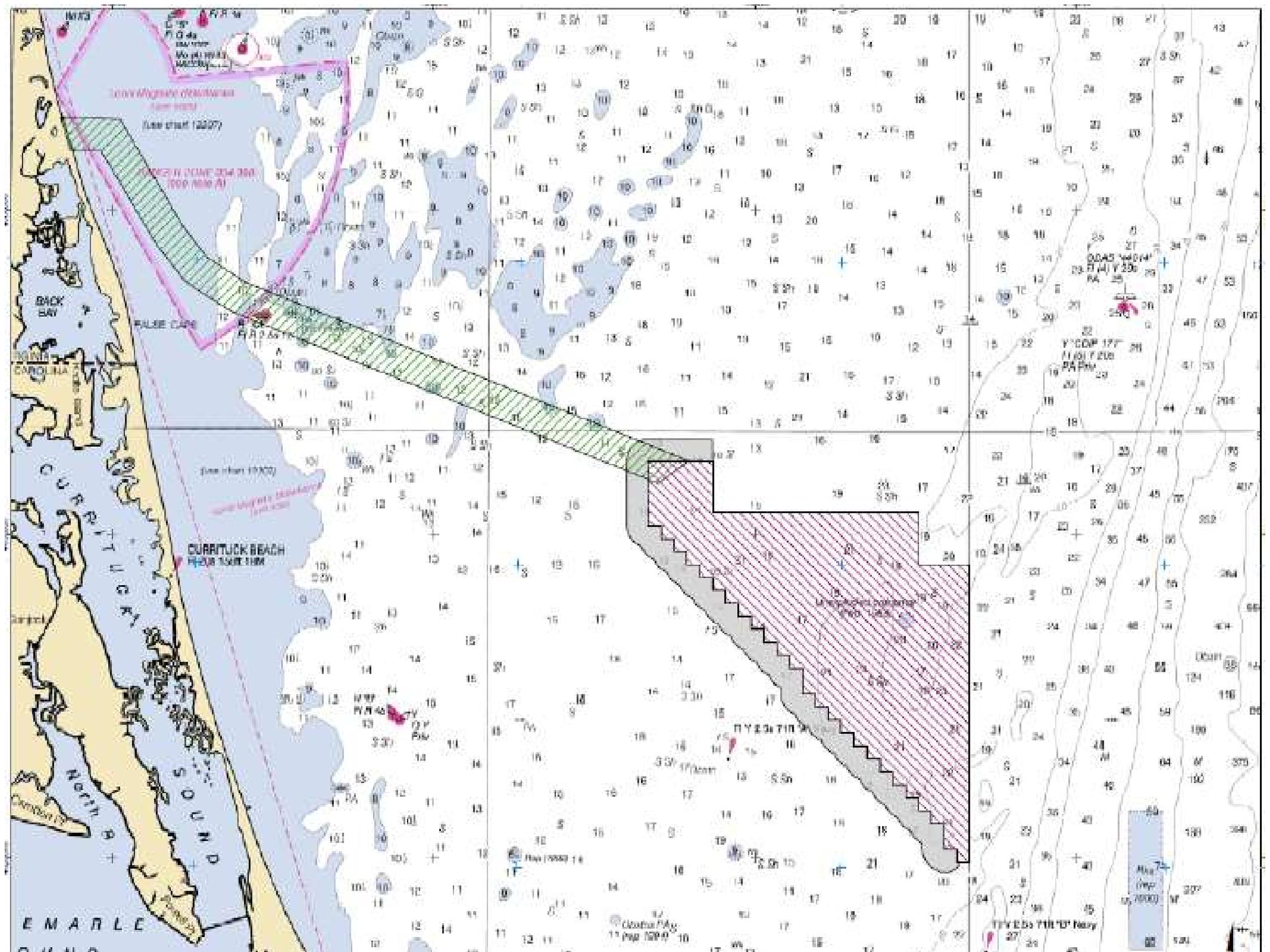


- Marine environment: sea waves, seabed mobility, corrosion, weather downtime
- Specific Health and Safety risks and requirements
- Huge scale of operations

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

Buoy deployment

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

Potential

2021-2022

Planning, assessment & stakeholder outreach

Project permitting

2023 Onshore construction

2024-2025 Offshore construction

Highlights from APEM surveys to date



For more information:

www.avangridrenewables.com/kittyhawk

Questions?

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