

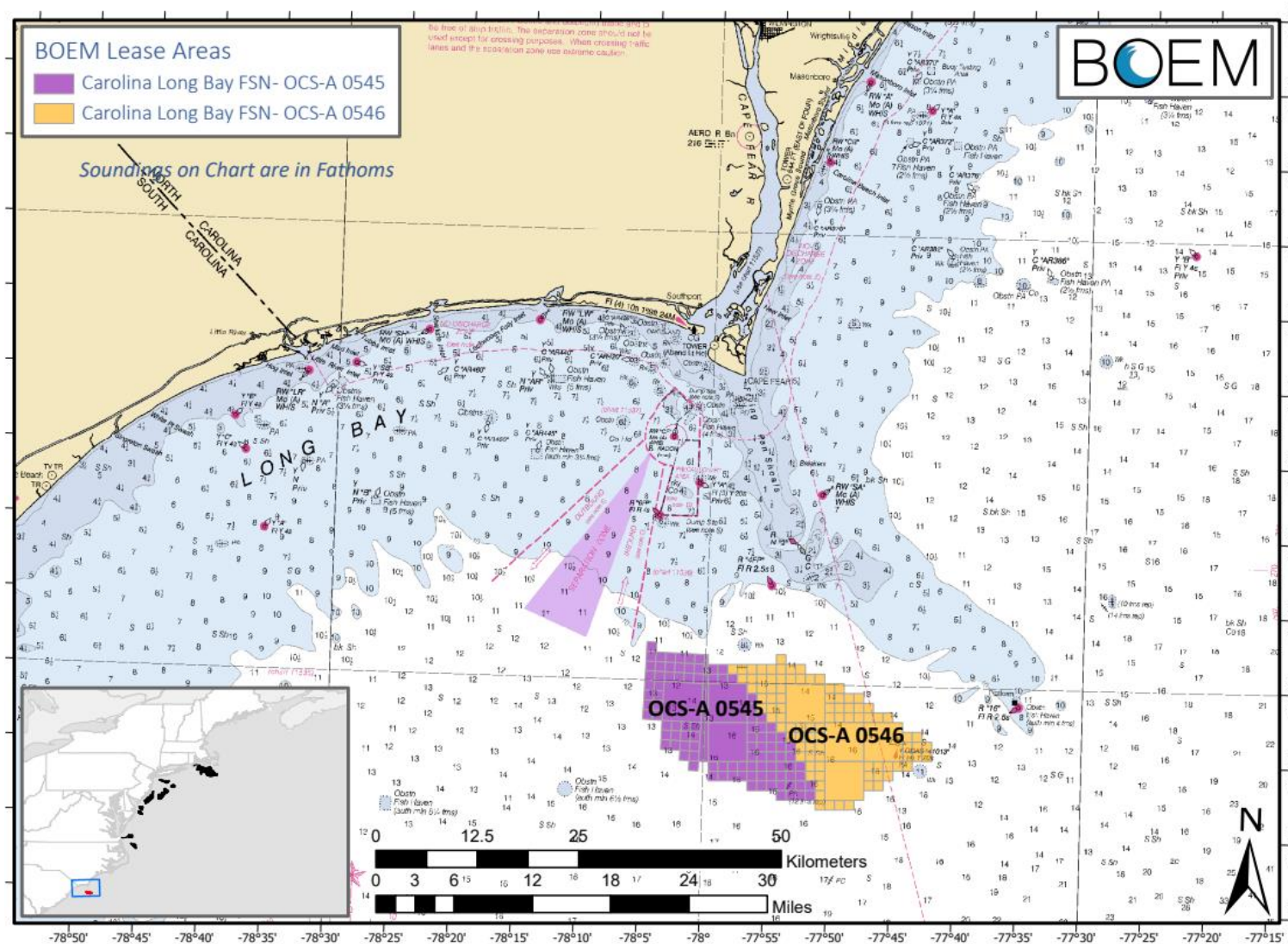
Carolina Long Bay 2023 Offshore Wind Activities

Lease Area OCS-A 0545
TotalEnergies Renewables USA, LLC

Lease Area OCS-A 0546
Cinergy Corp., a direct non-regulated
subsidiary of Duke Energy

Brunswick County Shoreline Protection Committee
November 29, 2023

Carolina Long Bay Offshore Wind Lease Auction – May 2022



Auction Winners

- OCS-A 0545: TotalEnergies Carolina Long Bay, LLC
 - 54,937 acres
- OCS-A 0546: Cinergy Corp.
 - 55,154 acres

Lease Reassignments

- OCS-A 0545: Assignment of lease from TotalEnergies Renewables USA LLC, to TotalEnergies Carolina Long Bay LLC, approved November 16, 2023.
- OCS-A 0546: Assignment of lease from Duke Energy Renewables Wind LLC to Cinergy Corp. approved July 12, 2023.
 - Cinergy Corp. is a direct non-regulated subsidiary of Duke Energy (“Duke Energy”).¹

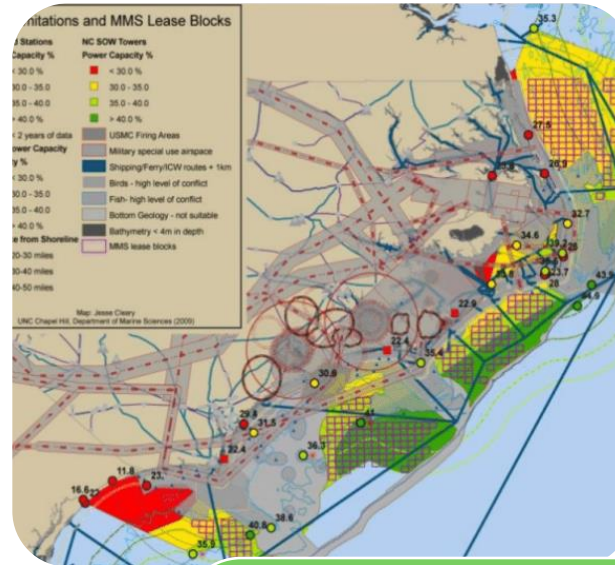
1) Cinergy Corp is not regulated by the North Carolina Utilities Commission (Commission) or in any way sanctioned by the Commission.

Carolina Long Bay: How did we get here?



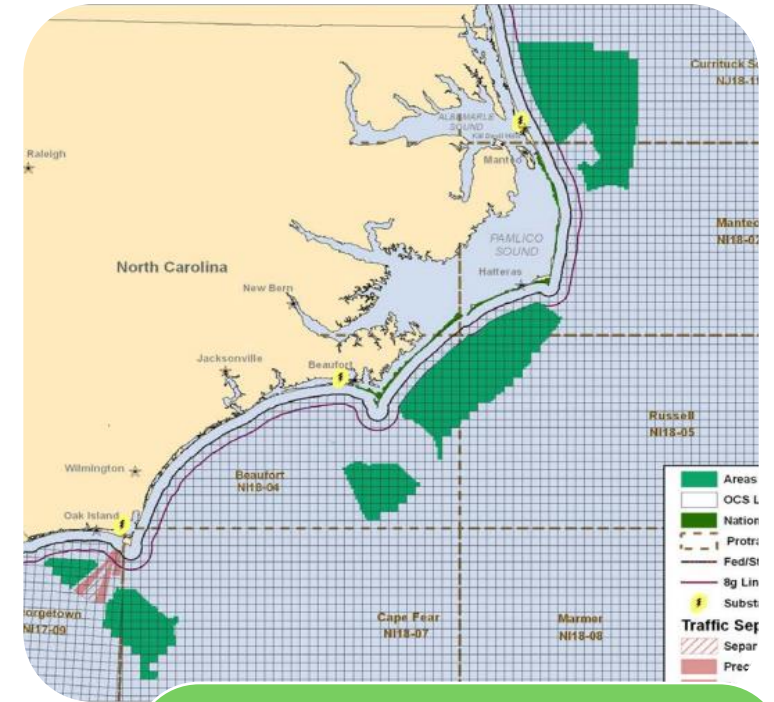
2008

- NC General Assembly requested a feasibility study for North Carolina offshore wind development



2009

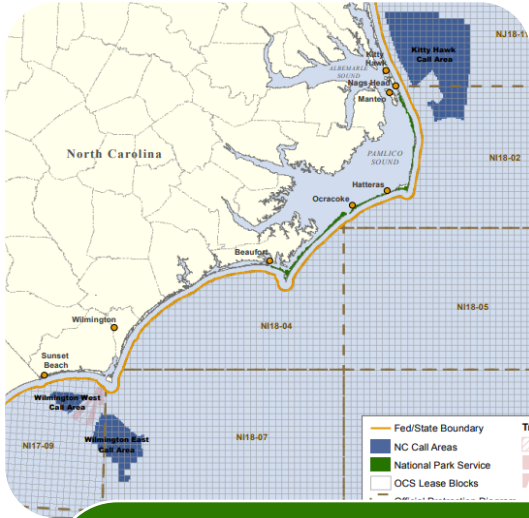
- UNC Study released, per General Assembly request
- Considered fish habitats, bird habitats, transmission, fishing, navigation, military, etc



2011

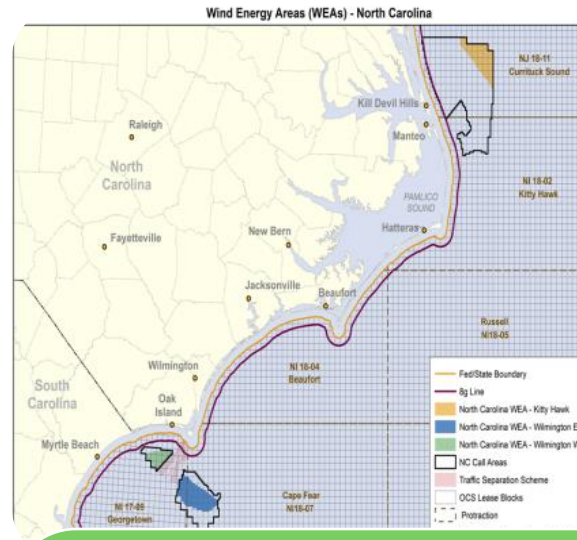
- Bureau of Ocean Energy Management (BOEM) NC Task Force created
- Purpose: to define potential areas for offshore wind development
- Included state, federal, local and tribal governments; sought public input
- 10+ Meetings held from 2011-2021

Carolina Long Bay: Still getting here



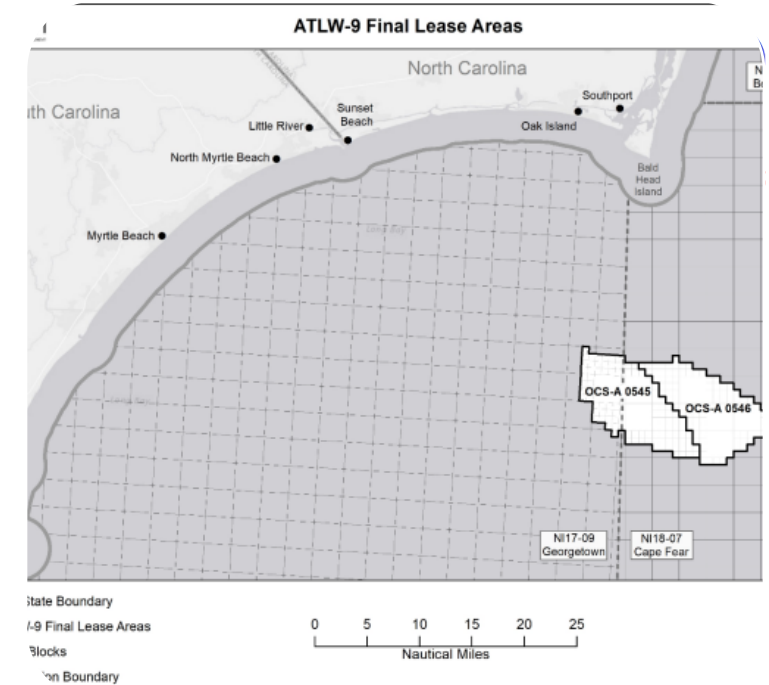
2012

- BOEM Call for Information requesting public input and developer interest in 3 areas
 - Kitty Hawk
 - Wilmington West
 - Wilmington East
- BOEM Notice of Intent (NOI) to Prepare an Environmental Assessment (EA)



2015

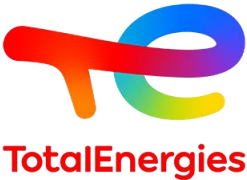
- EA Published by BOEM: analyzed environmental and socioeconomic impacts of leasing and site characterization
- Public meetings to gather feedback plus written comments
- Comments received were addressed in final EA



2021-2022

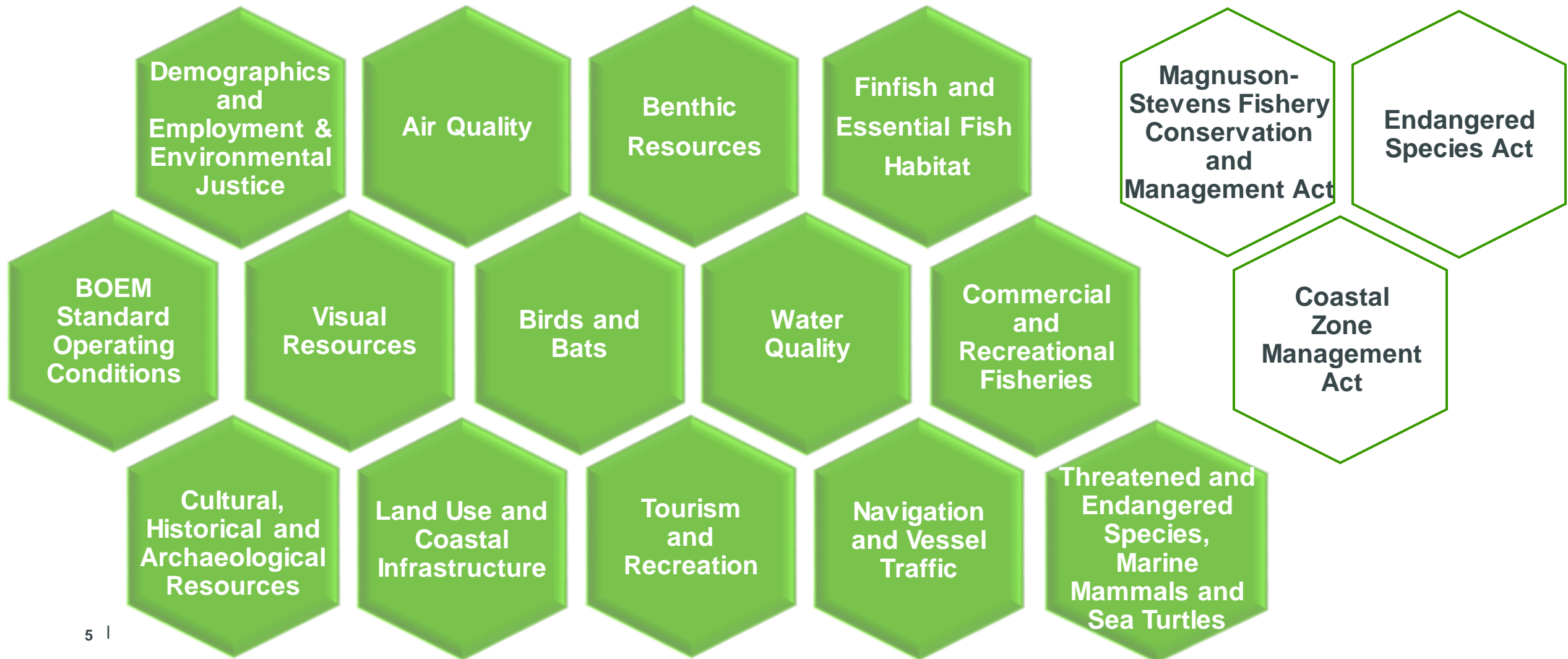
- BOEM advances Wilmington areas
 - 8/2021: Intent to prepare Supplemental EA (SEA)
 - 12/2021: Draft SEA
 - 3/2022: Final SEA released; finding of no significant impact

Carolina Long Bay: 2022 Supplemental Environmental Assessment



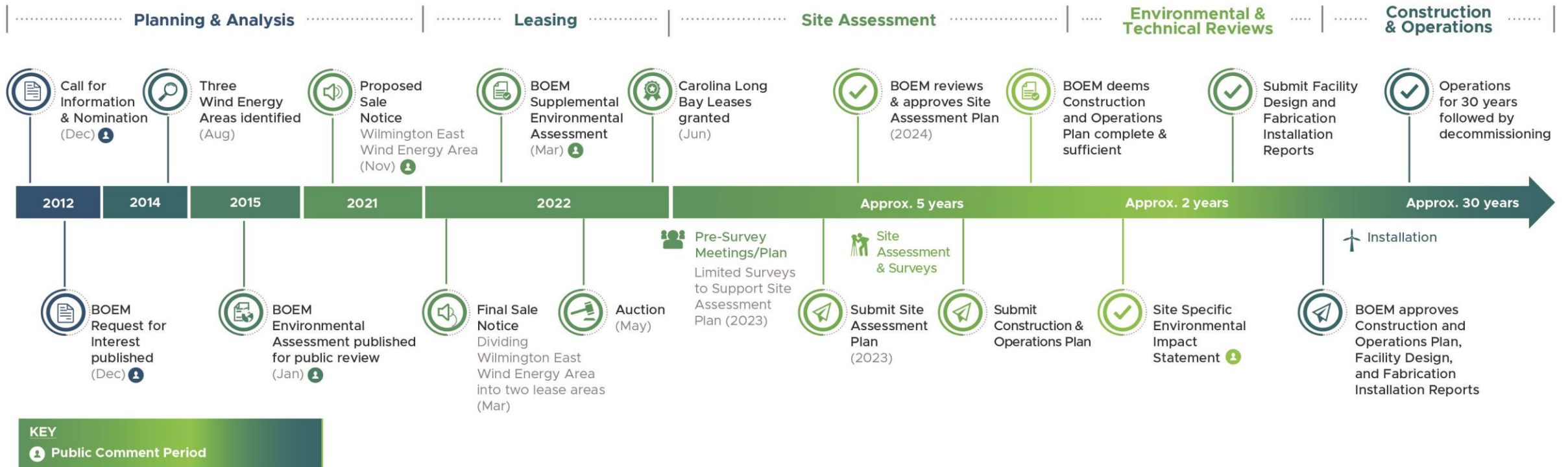
Evaluations

Consultations



CAROLINA LONG BAY

MAJOR PROJECT MILESTONES*



* This timeline indicates BOEM project milestones for the Carolina Long Bay Project

Whales and Offshore Wind

National Oceanic and Atmospheric Administration:

"We work with our partners to analyze and understand the causes of death when we are able, following the science and data. At this point, there is no scientific evidence that noise resulting from offshore wind site characterization surveys could potentially cause mortality of whales. There are no known links between recent large whale mortalities and ongoing offshore wind surveys."

- Frequent Questions—Offshore Wind and Whales | NOAA Fisheries

(<https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-life-distress/frequent-questions-offshore-wind-and-whales>)

Additional Resources

- University of Rhode Island: Offshore wind turbines not cause of whale strandings, deaths, says URI ocean engineering professor - Graduate School of Oceanography
 - <https://web.uri.edu/gso/news/offshore-wind-turbines-not-cause-of-whale-strandings-deaths-says-uri-ocean-engineering-professor/#:~:text=News%20%26%20Events-.Offshore%20wind%20turbines%20not%20cause%20of%20whale%20strandings%2C%20deaths,says%20URI%20ocean%20engineering%20professor&text=URI%20expert%20James%20Miller%20says,to%20no%20impact%20on%20whales>
- Department of Energy: Addressing Misinformation on Offshore Wind Farms and Recent Whale Deaths
 - <https://www.energy.gov/articles/addressing-misinformation-offshore-wind-farms-and-recent-whale-mortalities>
- Project Wildlife and Offshore Wind (Duke University): Offshore Wind Energy Development and its Potential Threats to Marine Mammals
 - <https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/Offshore-Wind/NYSERDA-webinar-82323-Marine-Mammals-Duke-NOAA-Fisheries.pdf>
 - "What do we know about the strandings of humpback or other whales along the mid-Atlantic coast..."
 - ...there is no evidence that any activities associated with offshore wind cause nor have any connection to whale strandings
 - We are actively working to better understand the potential response(s) and any associated consequences"
- RWSC – The Regional Wildlife Science Collaborative for Offshore Wind supports research and monitoring on wildlife and offshore wind
 - rwsc.org

Does NOAA Fisheries authorize the death of whales as it relates to offshore wind development?

“NOAA Fisheries does not anticipate and has not authorized—or proposed to authorize—mortality or serious injury of whales for any wind-related action. Offshore wind developers have not applied for, and NOAA Fisheries has not approved, authorization to kill any marine mammals incidental to offshore wind site characterization surveys or construction activities. Marine mammals may respond to exposure to these surveys, for example, by avoiding the immediate area. (see Frequent Questions—Offshore Wind and Whales | NOAA Fisheries)”

Engagement Activities

Communication Plans

Posted on Project Websites

[Wind Energy - Environment - Duke Energy \(duke-energy.com\)](https://www.duke-energy.com/wind-energy-environment)

[TotalEnergies Carolina Long Bay | Carolinas Wind Farm](#)

Agency Communication Plan – Individual plans per company

Fisheries Communications Plan – Individual plans per company

Native American Tribal Communication Plans – Joint plan between Duke Energy and TotalEnergies

Engagement Activities

Commercial & recreational fishermen, Fishing associations, Seafood markets & seafood buyers

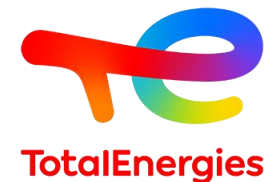
Universities, agencies & researchers

South Atlantic Fisheries Management Council Advisory Panel Meetings

Brunswick County Shoreline Protection

Tribal Engagement ongoing

Progress Reports detailing engagement activities are available at [Carolina Long Bay | Bureau of Ocean Energy Management \(boem.gov\)](#)



Offshore activities to assess buoy locations:
August 18, 2023 – August 21, 2023

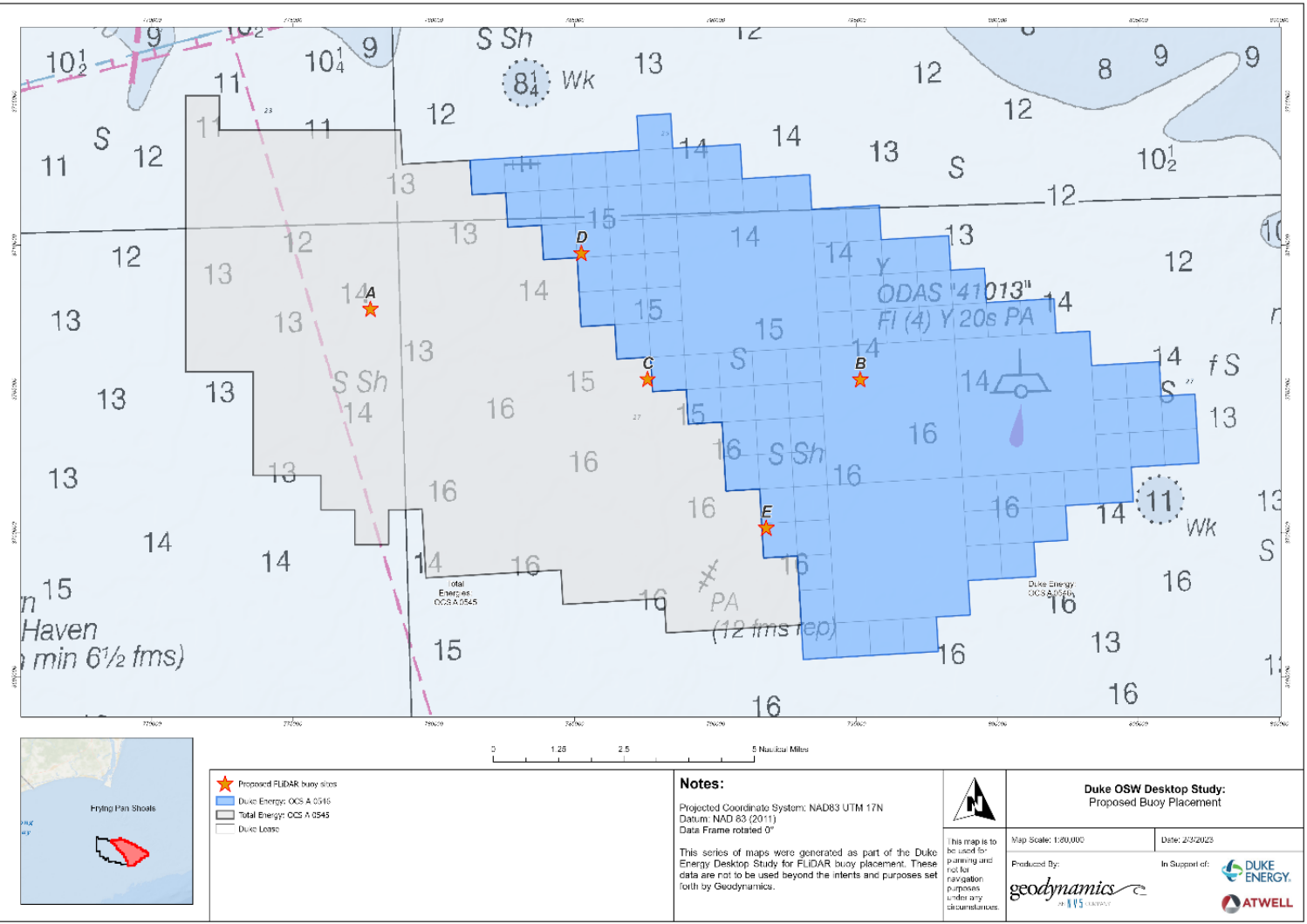
Survey Contractor:
Geodynamics, a NC-based company

Protected Species Observer Contractor:
RPS

Offshore Fisheries Liaison Contractor:
RPS

Vessel: R/V Shackleford, mobilized from Safe
Harbor South Harbour Village in Oak Island

Survey Locations



Plan for Buoys

Meteorological Buoys: Two buoys (one within each lease area) equipped with floating light detection and ranging (LiDaR) and other sensors

Environmental Buoy: Wildlife monitoring; triangulation for locating whale and other marine mammal activity

*3 buoys are planned

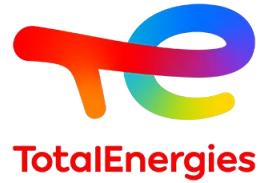
*Based on real time review of data only locations A, B, and C were surveyed

Survey Locations

Survey Location	Latitude	Longitude
Location A	33.477819N	78.0119996W
Location B	33.447271N	77.830528W
Location C	33.442476N	77.913567W

Protected Species Observers (PSOs)

TotalEnergies and Duke Energy voluntarily committed to using NOAA trained and approved PSOs during surveys



Vessel Strike Avoidance Procedures

- One PSO on watch from the time that the vessel leaves the dock until when the vessel returns to the dock
- Speed Restrictions
 - 10 knots or less inside SMAs and DMAs.
 - 4 knots or less through areas of visible jellyfish aggregations or floating vegetation
 - 4 knots or less in areas with less than 4 ft of clearance between vessel and bottom

Mitigation Distances:

Species / Species Group	Separation Distance (m)
North Atlantic right whale (NARW)	500
ESA-listed or Unidentified whales	500
Other whales	200
Dolphins, porpoises, seals	N/A
Sea turtles	Forward path (any distance)**
Giant manta rays	Forward path (any distance)**

TotalEnergies and Duke Energy voluntarily committed to a 10-knot speed restriction during surveys

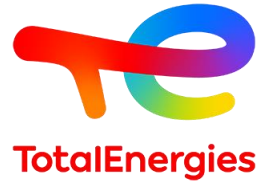
The efforts by The Companies to protect right whales while advancing these initial surveys shows that we do not need to choose between clean energy development and wildlife protection.

- Natural Resources Defense Council
blog

(<https://www.nrdc.org/bio/francine-kershaw/nc-offshore-wind-surveys-advance-protections-right-whales>)

Protected Species Observers (PSOs)

PSOs Monitored for Vessel Strike Avoidance



Total visual monitoring effort: 58:51 hours

Avoidance Actions	Project Total
Maintain course	11
Maintain speed	10
Total # of avoidance maneuvers	21

Description of Detections	Detection Events	Number of Animals
Sea turtle visual sightings	0	0
Delphinid visual sightings	14	48
Whale visual sightings	0	0
Pinniped visual sightings	0	0
All protected species detections	14	48



8/20/23: Common bottlenose dolphin

Buoy Sites

- 300m x 300m square at Sites A, B & C

Equipment

- Sidescan Sonar (SSS)
- Multibeam Echosounder (MBES)
- Magnetometer in Transverse Gradiometer configuration (TVG)
- Sub-bottom Profiler (SBP)
- Young-Modified Van Veen Grab (0.04m²)
- Video transects

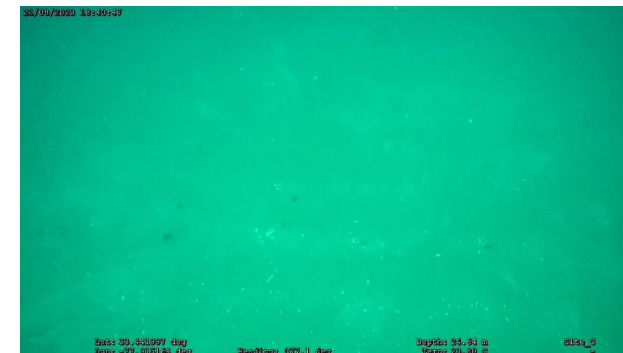
Survey design informed by 5+ agency meetings and discussions.



Still-shot from
Site A



Still-shot from
Site B



Still-shot from
Site C

Objective

To collect data on the wind resource and other parameters to inform the design and layout of the wind turbines

To collect data on the presence of wildlife to support the environmental analysis for installing and operating wind turbines

Approval Process

BOEM analyzed the environmental impacts prior to lease auction

Developers submit a Site Assessment Plan describing site assessment activities proposed

BOEM reviews the SAP to ensure activities proposed align with the pre-auction environmental analysis

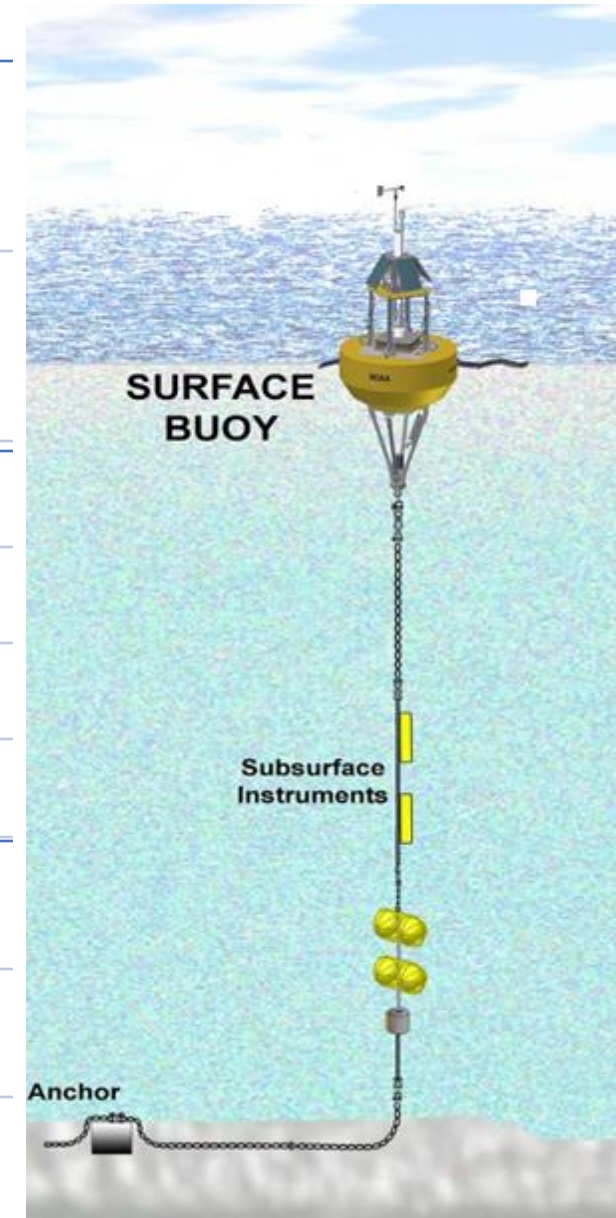
Developer obtains necessary permits to deploy buoys

Activities

Buoys equipped with measurement devices are deployed within the lease areas

Data is collected over a 1-to-2-year period

Data is transferred via satellite links or in the field instrument data downloads



Upcoming Activities

Submitted November 15, 2023

Submit Joint Site
Assessment Plan (SAP)

BOEM coordinates review with U.S. Fish & Wildlife (USFWS) and National Marine Fisheries Service (NMFS)

NC Coastal Consistency: meeting to be held with Div. of Coastal Mgt., Wildlife Resource Commission and Div. of Marine Fisheries to discuss the draft SAP prior to BOEM's approval

Coordination / permitting / review by U.S. Coast Guard, USFWS, and Army Corp of Engineers prior to any buoy deployment

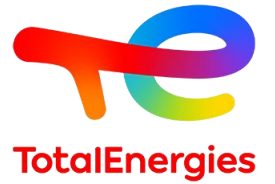
South Atlantic Fisheries Management Council Meeting

South Atlantic Fisheries Management Seminar Series

Outreach

2024 participation in local events, fishing tournaments and festivals

2024 outreach to educational, workforce development and community partners and leaders



What's ahead...

Partners in Education

Investing in science, technology, engineering, and math enrichment opportunities associated with offshore wind in local K-12 schools, community colleges and universities.

Community Supporter

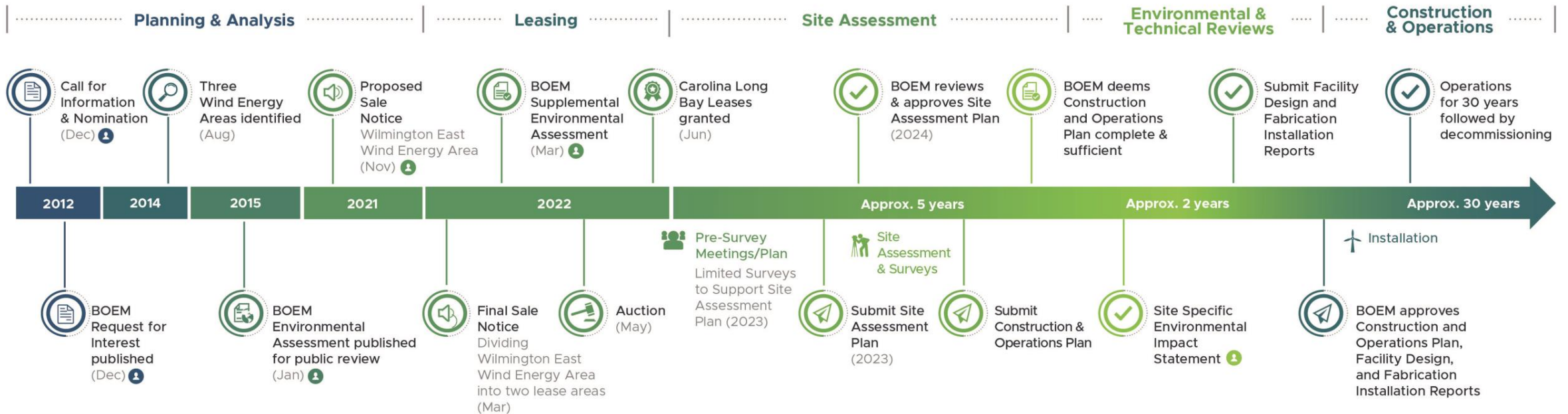
Making a difference. Listening to you, and working with you to add value where it's important, and invest in initiatives you care about.

Economic Investment

Between the construction phase and operations and management, we will help bring thousands of high-paying jobs to the region, diversifying and growing the area's economy

CAROLINA LONG BAY

MAJOR PROJECT MILESTONES*



KEY
 Public Comment Period

* This timeline indicates BOEM project milestones for the Carolina Long Bay Project

Questions & Discussion

