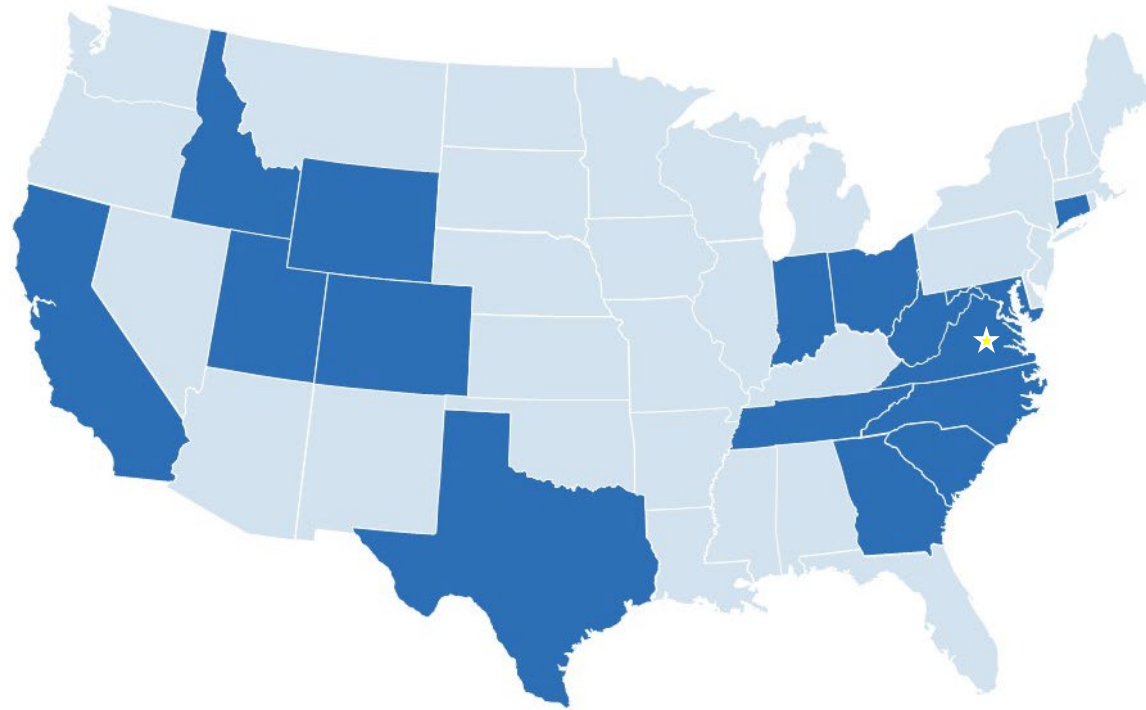




Coastal Virginia **Offshore Wind**





- Headquartered in Richmond, VA
- Operating in 16 states and serve nearly 7 million customers
- Committed to safe, clean, reliable and affordable energy
- More than 85% of our energy generation comes from clean energy sources or natural gas
- One in five new hires is a veteran

17,300
Employees

3.458M
Electric
Utility Customers

3.505M
Gas Utility
Customers

30.2 GW
Generation

45%
Carbon Emission Rate
Reduction Since 2005

29%
Reduction in Methane
Emission Since 2010.

3rd
Largest Solar Fleet in
the U.S.

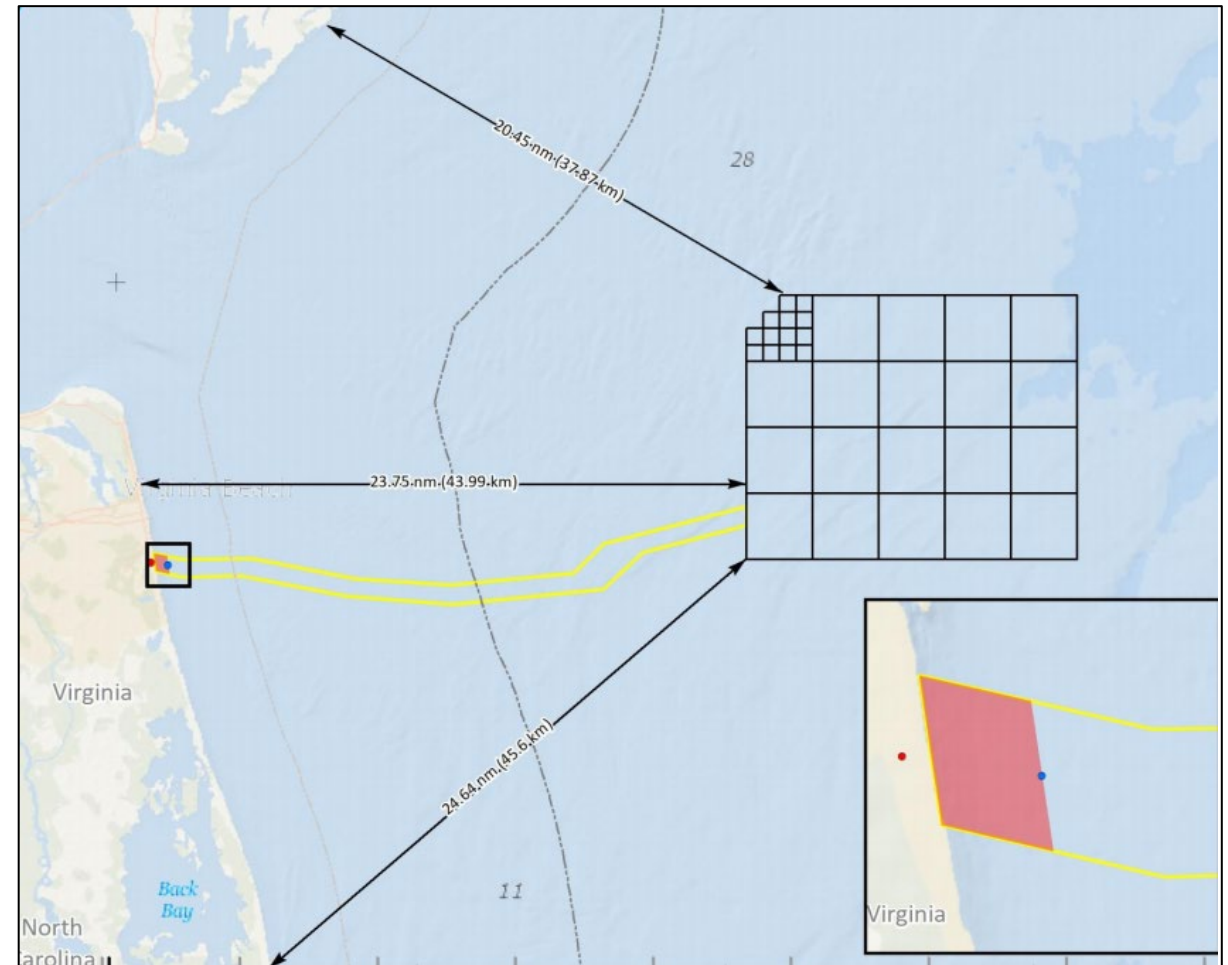
Pilot Project

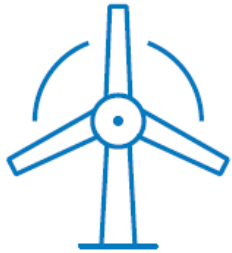
- **First offshore wind project installed in federal waters and first owned by an electric utility**
- Two 6-megawatt wind turbines
- 12-megawatt total capacity
- Enough to power up to 3,000 homes
- Approximately 600 feet tall, the height of the Washington Monument
- Located within a 2,135-acre research lease area, 27 miles off the coast of Virginia Beach



Commercial Project

- Enabled by legislation signed into law in 2020 (Virginia Clean Economy Act)
- 2.6GW total capacity
- Scheduled for completion in 2026
- Located within a 112,800-acre lease area just east of the pilot project
- Turbines to be installed by the first Jones Act compliant offshore wind turbine installation vessel





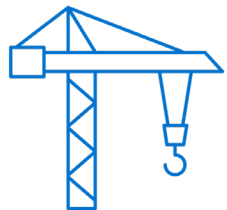
Wind Turbines

- Up to 205 positions including spares
- 14MW SGRE wind turbine
- Up to 869 feet tall



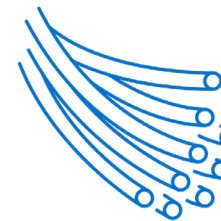
Inter Array Cable

- Total length up to 300 miles
- Up to 7.9 inches in diameter
- Buried up to 5.6 feet beneath the seabed



Foundations

- Monopiles for Wind Turbines
- Open Jackets for Offshore substations



Export Cable

- Nine 230 kV Circuits
- Total length up to 417 miles
- Up to 11.4 inches in diameter
- Buried up to 16.4 feet beneath the seabed



Offshore Substations

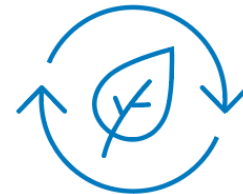
- Up to three offshore substations
- Up to 1,000 MW
- 66kV to 230kV step up

Environmental and Economic Benefits



Clean Air

Generates enough energy to power 660,000 homes with zero emissions and fuel costs.



Clean Energy Goals

Critical resource for meeting the Commonwealth's objective of carbon-free energy by 2045.



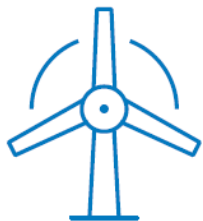
Clean Energy Economy

Foundation that can develop into a Virginia supply chain hub to stimulate economic growth and drive down costs



Clean Energy Jobs

Creates clean energy and manufacturing jobs throughout the Commonwealth as well as a talent pipeline through workforce development partnerships



Clean Energy Diversity

Complementary resource with solar since both generate energy at different times.

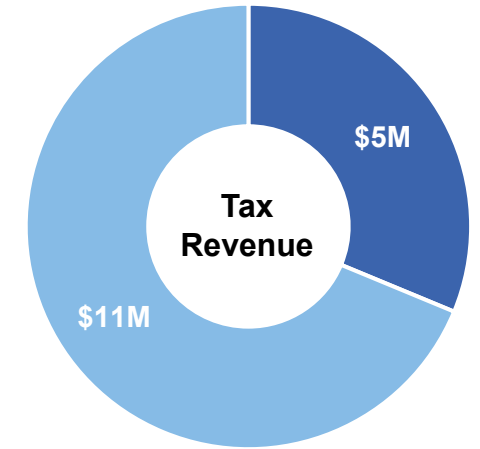
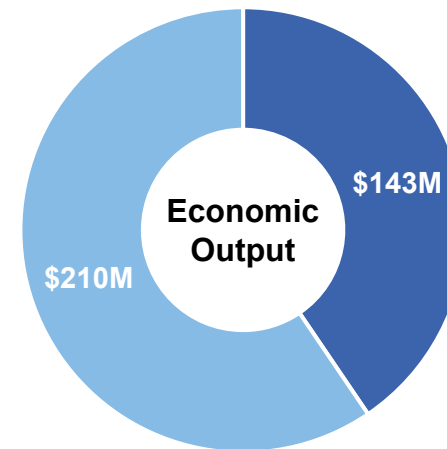
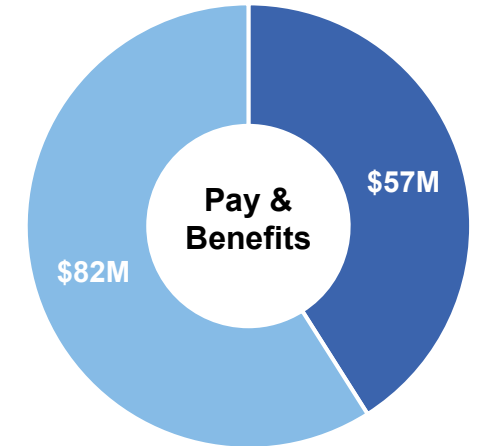
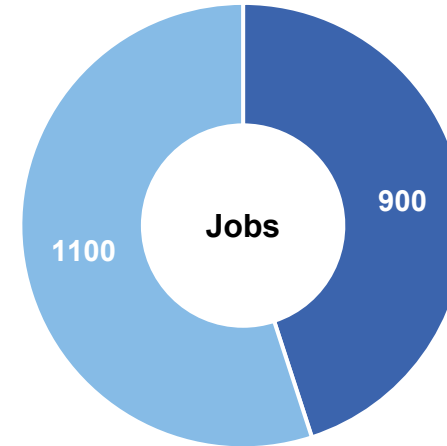


Clean Energy Research

Continue to support the advancement of offshore wind technology and environmental sustainability for marine, avian and terrestrial habitats

Growing a Clean Energy Economy

- Approximately **900 jobs** and **\$143 million in economic impact** annually during construction
- Approximately **1,100 jobs** and almost **\$210 million in economic impact** annually during operation
- Priority hiring of veterans, local workers, and individuals from economically-challenged communities
- Maximizing opportunities for Virginia vendors, subcontractors, and suppliers
- Actively engaging Virginia businesses through outreach programs
- Workforce Development Partnerships

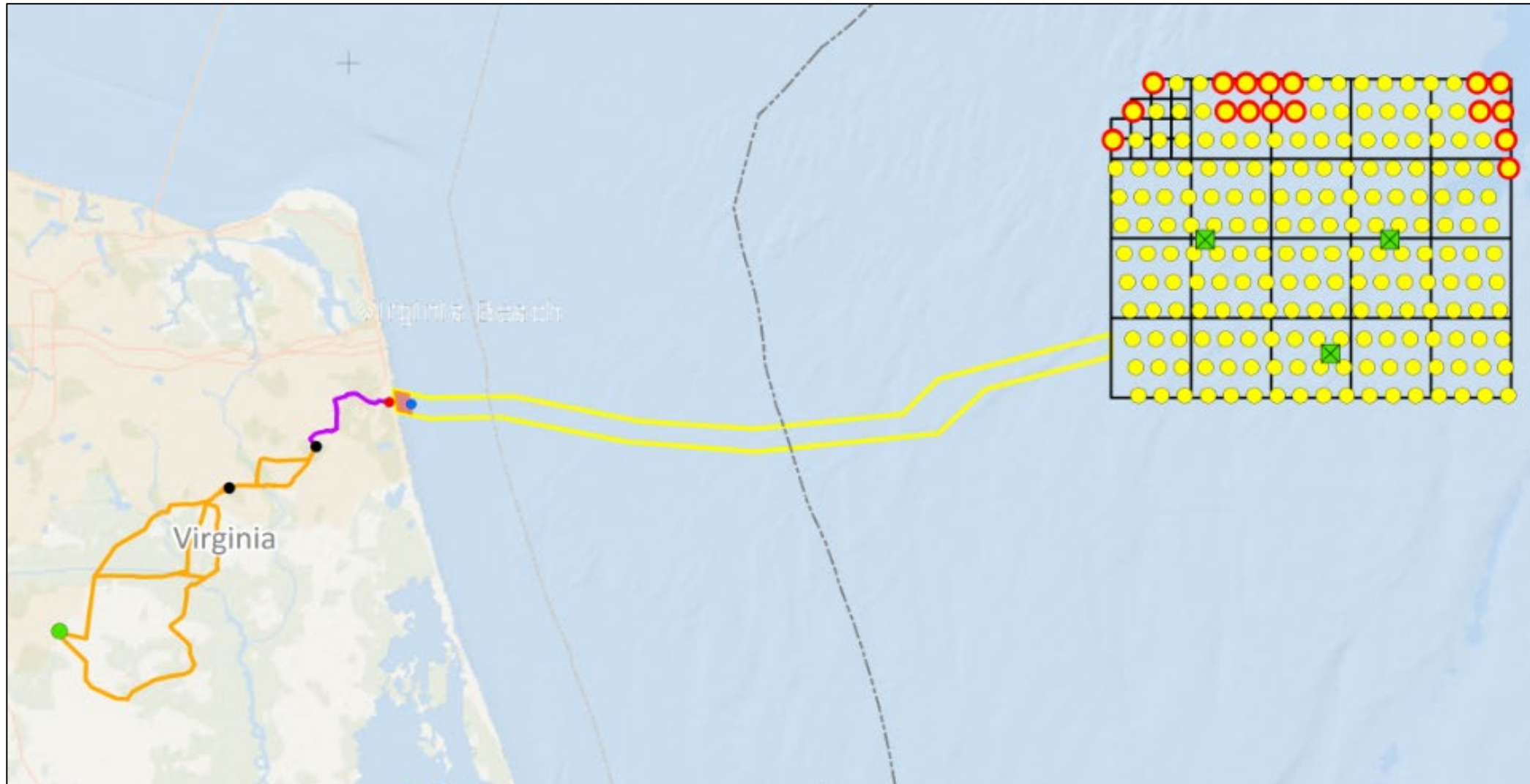


Source: Mangum Economics, *Potential Impact of the Development of the Offshore Wind Energy Industry on Hampton Roads and Virginia*, September 2020.


Operation

Construction

Offshore to Onshore



COASTAL VIRGINIA OFFSHORE WIND: CONSTRUCTION AND OPERATIONS PLAN




- Offshore Horizontal Directional Drilling (HDD) Punch-Out Cable Landing Location (Pending SMR Approval)
- Onshore Export Cable Route
- Switching Station
- Interconnection Cable Route
- Onshore Substation - Fentress Substation
- Nearshore Horizontal Directional Drilling (HDD) Area
- Offshore Export Cable Route Corridor
- Lease Area
- 3-Nautical Mile Limit
- 12-Nautical Mile Limit

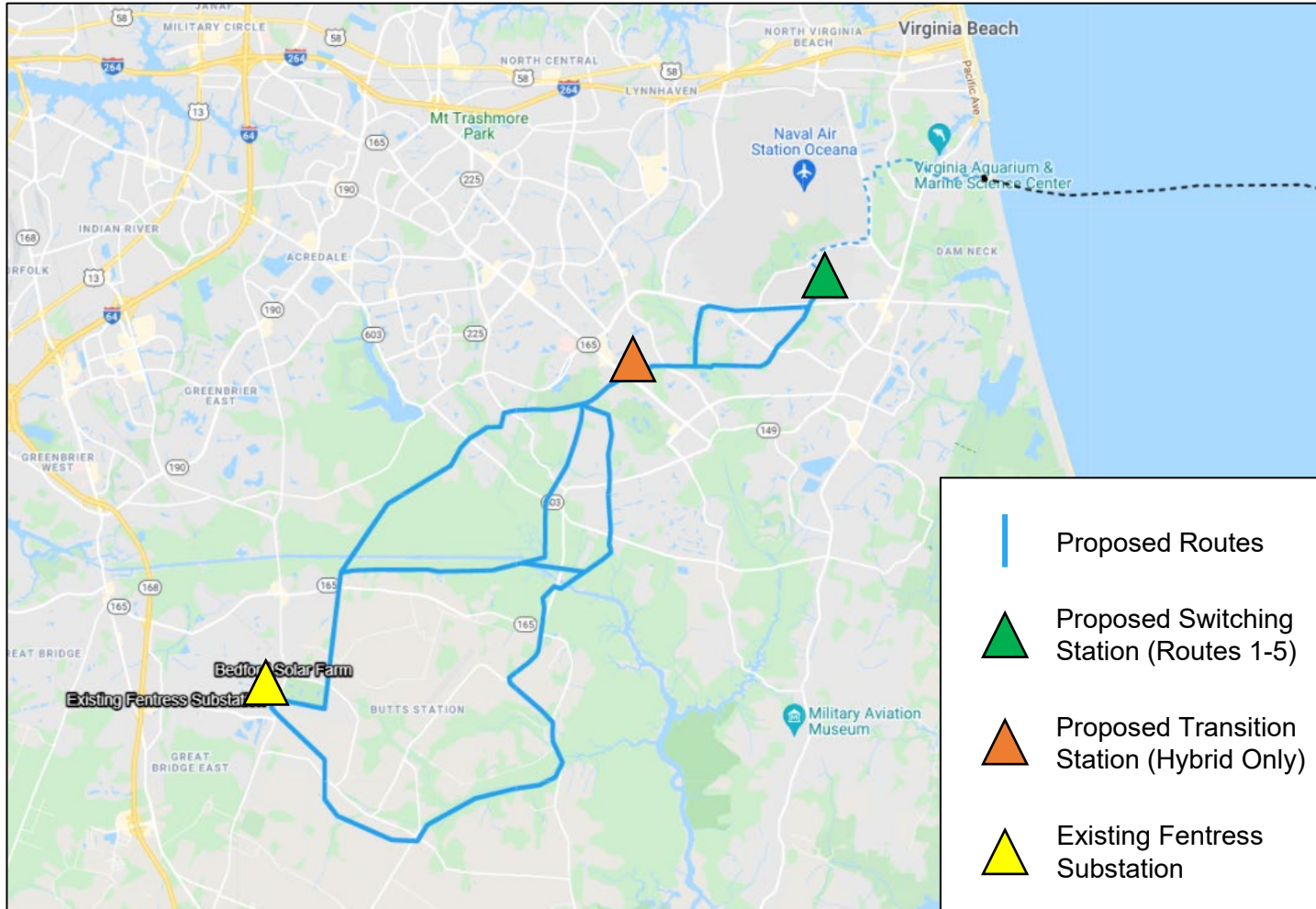
Date	June 8, 2021
Projection	NAD 1983 2011 UTM Zone 18N
Personnel	Figure Prepared by: Tetra Tech Offshore GIS Group

0 2 4 6 8 Miles
0 2 4 6 Nautical Miles
0 3 6 9 12 Kilometers

REFERENCE MAP



Onshore Project Summary

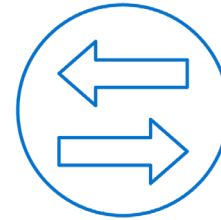


- Reviewed existing rights-of-way, locations of other infrastructure, conservation lands, cultural and historic resources, threatened and endangered species as well as public use and gathering spaces
- Identifying routes began with listening and learning from the community
- Hosted public meetings, workshops, roundtables and 1:1 meetings
- Six potential routes identified
- Plans to continue refining the routes based on public feedback



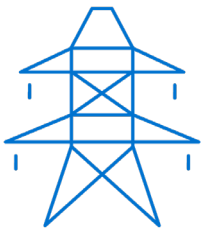
Landfall Location

- Proposed State Military Reservation
- Underground construction
- Coordination with military



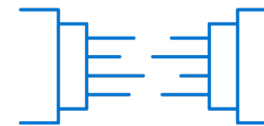
Onshore Right-of-Way

- Up to 140 feet wide
- Opportunities to overlap with existing rights-of-way
- Distance ranges from 18 to 25 miles



Onshore Transmission

- Three 230kV lines
- 6 alternatives
 - Five overhead
 - One hybrid
- New switching station



Point of Interconnection (PJM)

- Existing Fentress Substation
 - Expansion needed
 - Most efficient place for interconnection to the 500 kV grid

CVOW Commercial Project



✓ Nov. 2013	113,000-acre leasehold acquired via auction for \$1.6M
✓ Sep. 2019	2.6GW project announced
✓ Dec. 2020	Construction & Operation Plan (COP) submitted to BOEM
March – Fall 2021	Public meetings and conduct onshore field surveys
✓ July 2021	Notice of Intent (NOI) to prepare Environmental Impact Statement (EIS) issued (BOEM)
2H 2021	Virginia Rider/Certificate of Public Convenience and Necessity (CPCN) filing submitted (VA SCC)
August 2022	Draft EIS issued (BOEM)
2H 2022	Virginia Rider/CPCN proceeding completed (VA SCC)
May 2023	Final EIS issued (BOEM)
June 2023	Record of Decision issued (BOEM)
Late 2023	Begin construction of onshore transmission
2024 – 2026	2.6GW full-scale deployment construction

BOEM and SCC Alignment

BOEM Process

COP Submittal



- Completeness and sufficiency review

Public Scoping



- Public Notice of Intent in *Federal Register*
- 30-day public comment period
- Hold public meetings
- Receive input on issues and alternatives

Draft Environmental Impact Statement



- Prepare with cooperating agencies
- Public Notice of Availability in *Federal Register*
- 45-day public comment period
- Hold public hearings

Final Environmental Impact Statement



- Address public comments with cooperating agencies
- Public Notice of Availability in *Federal Register*

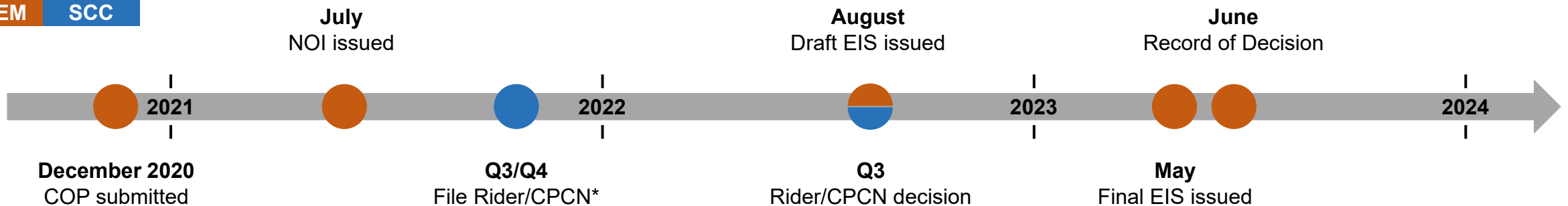
Record of Decision



- “One Federal Decision”
- Minimum 30-day wait period

Shared Timeline

BOEM **SCC**



*SCC Rider approval process is 9 months

- Air Quality
- Avian and Bat Species
- Aviation and Radar
- Benthic Resources, Fishes, Invertebrates, and Essential Fish Habitats
- Commercial and Recreational Fishing
- DoD and OCS National Security Maritime Uses
- Environmental Justice
- Historic Properties Assessment
- In-Air Acoustic Environment
- Land Transportation and Traffic
- Land Use and Zoning
- Marine Archaeological Resources
- Marine Energy and Infrastructure
- Marine Mammals
- Marine Transportation and Navigation
- Other Coastal and Marine Resources
- Physical and Oceanographic Conditions
- Population, Economy, Employment, Housing, and Public Services
- Public Health and Safety
- Recreation and Tourism
- Sea Turtles
- Terrestrial Archaeological Resources
- Terrestrial Vegetation and Wildlife
- Underwater Acoustic Environment
- Visual Impacts
- Water Quality
- Wetlands and Waterbodies

Geophysical & Geotechnical Surveys

- In April 2020, vessels began various surveys and studies in project lease area
- Focused on geological, biological, and oceanographic data to ensure coexistence between the natural marine ecosystem and clean energy development
- Offshore surveys and studies completed in mid-June

Marine Life & Maritime Community

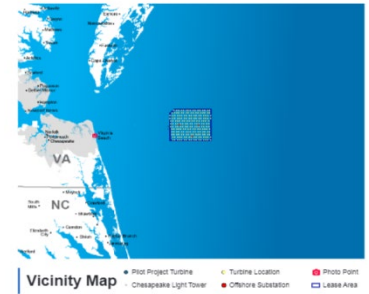
- Commercial & Recreational Fishing
- Benthic / Essential Fish Habitat
- Marine mammal and sea turtle protection
 - Avoidance and minimization measures
 - Noise mitigation research from Pilot
 - North Atlantic Right Whales
- Avian and Bat Species
- Artificial Reefs



Video

Offshore Visual Simulation

Virginia Beach Fishing Pier/Boardwalk
Virginia Beach



- VA Beach Fishing Pier / Boardwalk viewpoint
- 27.7 miles to initial set of turbine
- Clear day
- Difficult to see from shore due to the curvature of the earth



Onshore Evaluations

Desktop Analysis

- Informed by GIS, Census data, and data from Virginia Department of Historic Resources, Historic Resources Registries, Bureau of Ocean Energy Management, United States Fish and Wildlife Service, Virginia Natural Heritage Inventory, Department of Wildlife Resources

Field Verification

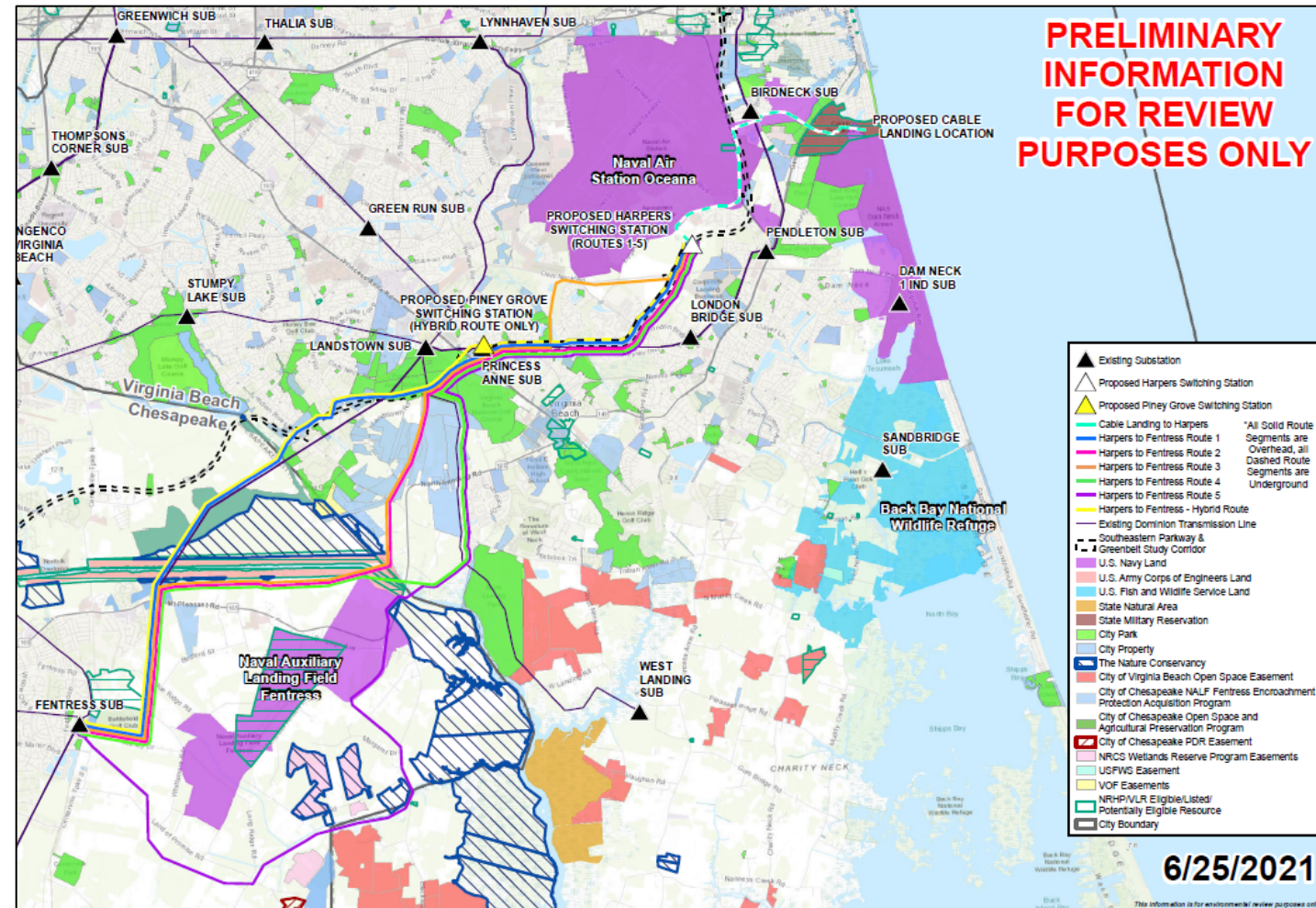
- Surveys: Wetlands, Visual, Aboveground Historic, Archaeology, T&E species

Community Outreach

- 1x1 and community meetings, virtual and in-person workshops; digital, media, and mailing communications

State Corporation Commission

- Determines final route to build



Outreach Efforts

Stakeholder Engagement

- General public
- Landowners
- Neighborhood associations
- Elected Officials
- Government agencies
- Military
- Businesses
- Environmental, marine life advocates
- Recreational enthusiasts
- Fishing community
- Shipping industry
- Universities
- Environmental Justice Communities
- Tribal Communities
- Historic and cultural stewardship organizations



Thank You

Contact Us Directly

- Call: 1-844-319-2065
- Email: info@coastalvawind.com
- Visit: coastalvawind.com

GeoVoice

- Review the study area
- Add comments, provide input or share an insight on the location of important natural and historical resources.
- Track the project as it develops and receive updates.
- Available now on coastalvawind.com

