Offshore Wind
for North Carolina

FACTS & FIGURES

$4.6 Billion
The economic output that North Carolina could realize with 2.8-gigawatts of offshore wind development

$139,000
The average annual earnings for an onsite offshore wind employee

6 Months
How long it takes for an offshore wind turbine to repay its carbon footprint

$3.7 Billion
Total of direct investment the offshore wind industry has made in the U.S. to date, largely directed to states with procurement targets

31,000
Direct and indirect job years supported by 2.8-gigawatts of offshore wind development

$109 Million
Supply chain, development, and operation expenditures anticipated to meet the national development target of 30-gigawatts by 2030

WHY OFFSHORE WIND?

Once-in-a-generation economic opportunity

- The U.S. manufacturing supply chain is anticipated to require $93 billion in investment to build the blades, towers, and electrical components to support anticipated industry growth through 2030 – North Carolina's manufacturing strengths and optimal geographic location well-position the state to attract much of this investment.
- A pipeline of projects off the North Carolina coast will create tens of thousands of well-paying jobs in construction, operations & maintenance support.
- Port investments are being made up and down the east coast to accommodate offshore wind, many of which will benefit other port-dependent industries.

Large-scale renewable resource to drastically cut carbon pollution and benefit local communities and environment

- Projects being proposed off the mid-Atlantic coast are up to 3x larger than traditional power plants, creating one of the greatest opportunities to displace pollution from fossil fuel power generation that contributes to respiratory illness and climate change.
- Offshore wind can be developed in an environmentally responsible manner with proper siting, construction, operation, and wildlife monitoring and mitigation. Advances in technology, such as quiet foundations and smart curtailment, can minimize risks to wildlife during construction and operation and create opportunities for US led technological development and manufacturing.

Unique and necessary benefits to the electric grid

- Offshore wind produces a consistent and reliable stream of electricity, and blows the strongest during winter mornings & summer afternoons when North Carolinians use electricity the most.
- Winds offshore blow at different times than when the sun is shining & when wind is blowing on land, complementing other renewable resources to produce reliable power around the clock.
- Offshore wind is a renewable resource that requires no fuel, locking in low-cost energy rates and minimizing price shocks due to fluctuating fuel prices.

WHY NOW?

- North Carolina needs large scale renewables to meet the needs of an increasingly electrified and clean economy. Duke Energy and the state can't realistically meet clean energy goals without offshore wind.
- Major component manufacturers are scouting where to locate their operations and are giving the strongest preference to states that have made a clear commitment to developing offshore wind – this is not an opportunity we can afford to pass up.
- Eastern seaboard states have identified this massive economic opportunity and are already setting aggressive goals to help secure the demand necessary to attract the manufacturing supply chain. Below is a list of state procurement targets, and examples of some of the many investments made in each.

Massachusetts
- 5,600MW
- Port investment – Vineyard Wind, $50 million

Rhode Island
- 400MW
- Port investment – Ørsted & Eversource, $40 million

Connecticut
- 2,000MW
- Port investment – Ørsted & Eversource, $157 million

New York
- 9,000MW
- Port investment – Equinor, $60 million

New Jersey
- 7,500MW
- Foundation facility – EEW, $250 million

Maryland
- 1,400MW
- Offshore wind steel fabrication center – Ørsted, $70 million

Virginia
- 5,200MW
- Blade facility – Siemens Gamesa, $200 million

FAQs

How does offshore wind collaborate with the military?

- The military has a well-established and rigorous process for ensuring that wind development occurs in a manner that is compatible with military operations. The Department of Defense (DoD) Siting Clearinghouse examines and analyzes each proposed wind farm, and includes participation from all five military branches. Federal law allows DoD to raise concerns if a proposed energy project, individually or on a cumulative basis, may adversely impact military readiness or operations.

Tourism is essential to coastal North Carolina economies, will offshore wind impact this industry?

- Research has shown that offshore wind can provide significant benefits to local tourism. A study published by the University of Rhode Island found that tourism on Block Island - the country's first offshore wind farm, where the turbines are easily within view at 3 miles from shore - increased the year after the project was built, resulting in a 19% increase in occupancy rates.
- Coastal communities are exposed to the most significant impacts of climate change, such as severe flooding, sea-level rise and coastal erosion. Offshore wind offers a carbon-free source of electricity and essential technology in tackling the root cause of climate change.

How will offshore wind impact my electricity bill?

- Due to market developments experienced in Europe, economies of scale achieved by the first wave of offshore wind deployment in the Northeast, and continued turbine technology advancements, the cost of offshore wind generation has significantly decreased since the first turbines were installed in the early 1990's. The cost of offshore wind is already more cost-effective than coal, and is anticipated to be competitive with other resources by 2030.
- Maximizing competition through the leasing, procurement, and component sourcing phases can keep costs of offshore wind resources in North Carolina low.