

### NORTH CAROLINA

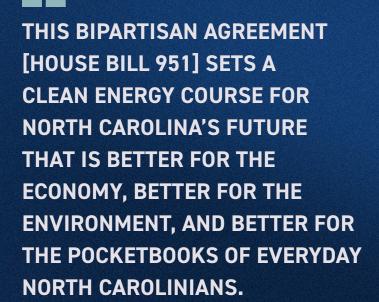
LEADING THE CHARGE TO A CLEAN ENERGY FUTURE

















Roy Cooper, Governor of North Carolina















#### **NORTH CAROLINA:**

# WHERE BUSINESS IS ELECTRIFYING

### # 1 IN SUSTAINABILITY

According to Site Selection magazine, North Carolina ranks #1 in the South Atlantic US and #7 in the nation for sustainability.

# **20%**REDUCED CO<sub>2</sub> FOSSIL FUEL EMISSIONS

Between 2005 and 2018, North Carolina reduced its fossil fuel emissions by 20%, nearly double the nation's average  ${\rm CO}_2$  reduction.

## # 1 IN RENEWABLE ENERGY LEADERSHIP

North Carolina is leading the charge on renewable energy according to SmartAsset. The state increased its production of renewables by nearly 52% between 2014 and 2019, which is double the average of all 50 states.

#### 1 IN 3 WORKERS

1 in 3 workers in North Carolina's clean energy economy have participated in a North Carolina Community College program.

#### NORTH CAROLINA'S HISTORY OF COMMITMENT TO

#### 2002

#### Clean Smokestacks Act

Required significant reductions in the emissions of nitrogen oxides and sulfur dioxide from coal-fired plants in North Carolina.

#### 2007

#### Renewable Energy Portfolio Standard

Became first state in the Southeast US to adopt a renewable energy portfolio standard, which required utility providers to supply a portion of their retail electricity sales with renewable energy sources.

#### 2018

#### **Executive Order 80**

Directed Cabinet agencies to develop strategies to substantially reduce statewide greenhouse gas (GHG) emissions; increase the number of registered, zero-emission vehicles (ZEVs); and reduce energy consumption in state-owned buildings.

#### TOP CHOICE FOR EV OPERATIONS

#### A Consolidated EV Supply Chain

North Carolina is a top choice for the consolidation of the EV supply chain. Recently announced investments in the state by Toyota, VinFast, Arrival, and Forza X1 totaling over \$7.86 billion solidify North Carolina's position as a leader in the nation's rapidly growing EV sector.

#### Raw Material Supplier

- 1. Piedmont Lithium
- 2. Livent
- 3. Albemarle
- 4. SGL Carbon

#### **EV Manufacturer**

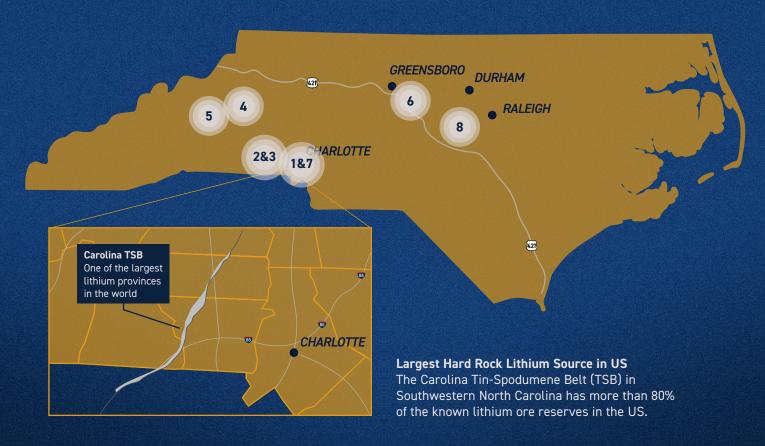
5. Forza X1

#### **Battery Manufacturer**

6. Toyota

#### **Battery and EV Manufacturer**

- 7. Arrival
- 8. VinFast



#### **CLEAN ENERGY**

#### 2021

#### **Executive Order 218**

Set the target for the development of 2.8 gigawatts (GW) of offshore wind energy production off the North Carolina coast by 2030 and 8.0 GW by 2040. North Carolina is poised to generate at least 3.8 GW of offshore wind energy by 2030, far exceeding the target set in Executive Order 218.

#### Energy Solutions for NC (HB 951)

Landmark, bipartisan legislation directing North Carolina utilities to cut power sector carbon emissions 70% by 2030 and reach carbon neutrality by 2050 using least-cost methods and without sacrificing reliability.

#### 2022

#### **Executive Order 246**

Set goals to further reduce GHG emissions in the transportation sector and increase the number of electric vehicles (EVs) on the road in North Carolina to 1,250,000 by 2030.

#### LEADER IN LOW-CARBON ENERGY SOURCES

#### WIND

#1 Offshore Wind Energy Potential on East Coast North Carolina boasts 297 GW of offshore wind capacity at 90 meters above the surface within 50 miles of the coast, the largest resource potential of any state on the East Coast.

#### Largest Wind Farm in Southeast US

North Carolina is home to Amazon Wind Farm US, a 104-turbine wind farm near Elizabeth City. Amazon Web Services contracts with the operator, Avangrid Renewables, to power its cloud data centers.

#### 3 Offshore Wind Energy Areas (WEAs)

North Carolina is home to three offshore wind energy areas designated by the federal Bureau of Ocean Energy Management (BOEM) – Kitty Hawk WEA, Wilmington East WEA, and Wilmington West WEA. Two of these have been leased for development to date:

- The Kitty Hawk WEA, leased by Avangrid Renewables, is projected to generate 2.5 GW of electricity.
- The Wilmington East WEA, leased to TotalEnergies Renewables USA and Duke Energy Renewables Wind, represents a potential of at least 1.3 GW of offshore wind energy.

#### **SOLAR**

Top Supplier of High Purity Quartz (HPQ) Spruce Pine, North Carolina, is home to operations that mine the world's largest known deposit of HPQ, a critical component of solar photovoltaic cells and semiconductors.

#### **#4** Installed Solar Capacity

North Carolina ranks fourth nationwide for installed solar generating capacity.

#### **NUCLEAR**

Top 5 Producer of Electricity from Nuclear Power North Carolina is among the nation's top five states producing electricity from nuclear power. The state is home to Duke Energy which operates the largest regulated nuclear fleet in the nation.

Exceptional Reliability with Low-Carbon Intensity North Carolina is a leader in providing reliable, carbon-free power. In 2020, Duke's nuclear fleet achieved a reliability rating of 94.4% compared to the national average of 92.5%.

#### **PARTNERS IN CLEAN ENERGY**

- The Environmental Stewardship Initiative (ESI) through the North Carolina Department of Environmental Quality (NC DEQ) offers technical assistance to businesses to achieve sustainability goals.
- The North Carolina Sustainability Energy Association (NCSEA) drives public policy and market development for clean energy.
- The North Carolina Clean Energy Technology Center at North Carolina State University (NCSU) provides services to North Carolina businesses to assist with the development and adoption of clean energy technologies.
- The Future Renewable Electric Energy Delivery and Management Center (FREEDM), a NSF Engineering Research Center headquartered at NCSU, conducts research to develop a more sustainable electric grid.
- The Research Triangle Cleantech Cluster (RTCC) accelerates growth of the cleantech economy by leveraging the unique concentration of industry, academic, and government leaders in the Research Triangle.
- The Southeast and Mid-Atlantic Regional Transformative Partnership for Offshore Wind Energy Resources (SMART-POWER), a bipartisan partnership between North Carolina, Maryland, and Virginia, provides a framework for the states to cooperatively develop offshore wind energy and the accompanying industry supply chain and workforce.



Wells Fargo Capitol Center 150 Fayetteville St. Suite 1200 Raleigh, NC 27601

919.447.7777 edpnc.com