



The North Carolina Energy Economy: A Closer Look

North Carolina's deep commitment to solar energy is paying off, creating numerous jobs and decreasing its need to continue importing coal. With increased attention to energy efficiency, public transit and its vast offshore wind resources, North Carolina leads South in the race to develop a clean, energy independent economy.

CLEAN ENERGY EMPLOYMENT

In 2012, businesses in North Carolina announced over 10,000 clean energy jobs, including:

- 65 in Biomass
- 100 in Energy Efficiency
- 2,569 in Solar Energy
- 16 in Clean Vehicle Manufacturing
- 7,000 in Mass Transit
- 135 in Smart Grid/Transmission
- 271 in Wind Energy

OTHER JOB CREATION RESOURCES

- Brookings provides a two page fact sheet detailing clean job growth and wages in North Carolina: [Sizing the Clean Economy in North Carolina](#)
- North Carolina Sustainable Energy Association offers a database of job opportunities in clean and fossil energy sectors: [Finding Employment and Employees in the Green Economy](#)

CLEAN ENERGY ECONOMY

EIA: Existing Renewable Generation (MWh) (2012)

| | 2010 | 2011 | 2012 |
|------------|---------|---------|---------|
| Wind | - | - | - |
| Solar | 11,000 | 17,000 | 40,000 |
| Geothermal | - | - | - |
| Biomass | 195,000 | 375,000 | 351,000 |

To see where Clean Energy Works for NC:
[CEW4US: North Carolina](#)

To learn more about E2:
[E2: Environmental Entrepreneurs](#)

For a full assessment of the energy sector in North Carolina, including a map of resource potential, and energy projects and infrastructure, categorized by county and congressional district please visit the Energy Information Administration: [North Carolina State Profile](#)

For detailed information on state utilities and electricity regulation, please visit Advanced Energy Economy Institute's [Public Utility Commission Portal](#).

NREL: Technical Renewable Potential (GWh)

| Total | Utility Scale PV | Rooftop PV | CSP | Onshore Wind | Offshore Wind | Biopower (Solid and Gas) | Geothermal |
|-----------|------------------|------------|-----|--------------|---------------|--------------------------|------------|
| 6,038,611 | 4,301,136 | 28,420 | 0 | 2,037 | 1,269,627 | 16,650 | 420,741 |

Clean Manufacturing Capacity

- GLWN provides a national map of manufacturers and suppliers in the wind industry: [Wind Industry Supply Chain Map](#)
- Dr. Keith Gabbage at the University of North Carolina at Greensboro details North Carolina's potential renewable energy supply chain: [Renewable Energy in North Carolina: The Potential Supply Chain](#)

Projects in Place (SNL Financial)

| | Announced (MW) | Under Development (MW) | Under Construction (MW) |
|------------|----------------|------------------------|-------------------------|
| Wind | 288 MW | 1149 MW | 29.4 MW |
| Solar | 950 MW | 154 | - |
| Geothermal | - | - | - |
| Biomass | 41.9 MW | 56.9 MW | - |

For more information on projects, visit NRDC's [renewable energy map](#), which shows specific projects in each state.

POLICY AND INVESTMENT

STATE POLICY

| | | | |
|--|------|---|-------------------------------|
| | | | |
| CleanEdge Ranking | 24th | Freeing the Grid | D (Net Metering) |
| Ernst and Young: State Energy Attractiveness | 24th | Freeing the Grid | B (Interconnection Standards) |
| Energy Efficiency Resource Standard | No | Renewable Energy Standard | 12.5% by 2021 |

- DSIRE, the Database of State Renewable Incentives for Renewable Energy from the North Carolina Solar Center, details all state and municipal renewable energy policies for all fifty states: [DSIRE: Renewable Electricity and Energy Efficiency Incentives and Policies](#)
- The U.S. Department of Energy lists state policy supporting alternative fuels and energy efficient transportation: [DOE: Clean Fuel Incentives and Regulatory Policy](#)

FEDERAL RESOURCES AND INVESTMENT

Federal Funding

| Energy Type | ARRA (Sec.1603) | USDA Grants | Loan Guarantees | Federal R&D Funding | Small Business Innovation Research |
|-------------------|-----------------|-------------|---------------------------------------|---------------------|------------------------------------|
| Wind | \$136,862,000 | 11,711,000 | 1.4 billion (split w multiple states) | \$3,240,000 | - |
| Solar | \$3,761,000 | 105,860,000 | - | | - |
| Geothermal | \$41,242 | - | - | \$1,293,625 | - |
| Biomass | \$89,000 | 75,000 | - | \$741,754 | - |
| Fuels | \$1,619,000 | - | - | | - |
| Energy Efficiency | \$283,300,000 | 23,254,000 | - | | - |

For a detailed list of ARRA awards, please click [here](#).

For detailed list of USDA grants, please click [here](#).

For a detailed list of DOE loan guarantees, please click [here](#).

To learn more about federal funding of clean energy, please visit of the [Office of Energy Efficiency and Renewable Technology](#)

For further information on Small Business Innovation Research Grant awardees, please visit the [Department of Energy's Office of Science](#).

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FURTHER RESOURCES AND ADVOCACY

State Organizations

[Eco-USA: List of North Carolina's Environmental Organizations](#)

Eco-USA is a database of state environmental organizations.

[North Carolina Solar Center](#)

North Carolina State University's Solar Center researches and develops solar energy throughout the state.

[North Carolina Wind Center](#)

Appalachian State University's Wind Center researches and develops wind power throughout the state.

[Department of Environment and Natural Resources](#)

Provides information on tax credits and rebates related to clean energy development.

[North Carolina Sustainable Energy Association](#)

Works to ensure a sustainable future by promoting renewable energy and energy efficiency to the benefit of North Carolina through education, public policy and economic development

[NC GreenPower](#)

Administered by Advanced Energy, NC Green Power works to connect consumers with green energy and carbon offset providers.

[North Carolina Economic Development Corporation](#)

MEDC helps businesses develop renewable energy resources and connects them with clean energy manufacturers, installers, and consultants in the state.

[Advantage Green](#)

Program of the AdvantageWest Economic Development Cooperation seeking to advance sustainable energy and green business in the western region of North Carolina.

[Triangle Clean Cities Coalition](#)

Local & state government agencies, private companies, non-profit organizations, and interested individuals dedicated to accelerating the use of alternative fuels and advanced transportation technologies in the greater Triangle Region of North Carolina

National and Government Organizations

[EERE – Clean Energy in My State](#)

Users can explore the Department of Energy's statistics and policy information related to renewables and energy efficiency.

[National Governor's Association: Profile of Your State's Green Economy](#)

NGA seeks to provide a detailed, empirical account of each state's existing assets across multiple green sectors and serve as a foundation for identifying future growth areas and related needs.

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[Advanced Energy by State \(AEE\)](#)

AEE is a national association of businesses and business leaders who are making the global energy system more secure, clean, and affordable.

[American Council on Renewable Energy: North Carolina Fact Sheet](#)

ACORE summarizes North Carolina's solar and wind irradiance, as well as its current policies in place to promote renewable energy.

[American Wind Energy Association: Wind Energy in Your State](#)

The American Wind Energy Association's summary of jobs directly supported by the wind industry in North Carolina.

[Solar Energy Industry Association: Policy in Your State](#)

SEIA compares North Carolina's solar capacity and potential to other states, and details the impact of solar energy throughout the state.