Southeast Wind Energy Fact Sheet

December 2014

Resource Potential

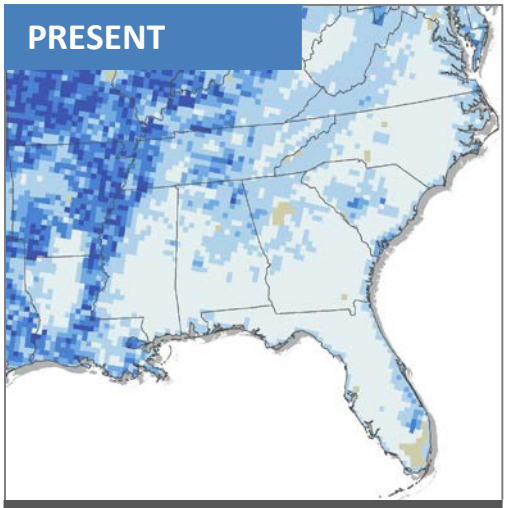
Maps below estimate areas where wind energy could be economically viable* when using available turbine technology. Not all areas shown can be developed.

PAST

Wind turbines were originally designed for the highest wind speed sites and were not well-suited to areas like the Southeast.

80m Height | Previous Technology
Potential: 25 TWh/year

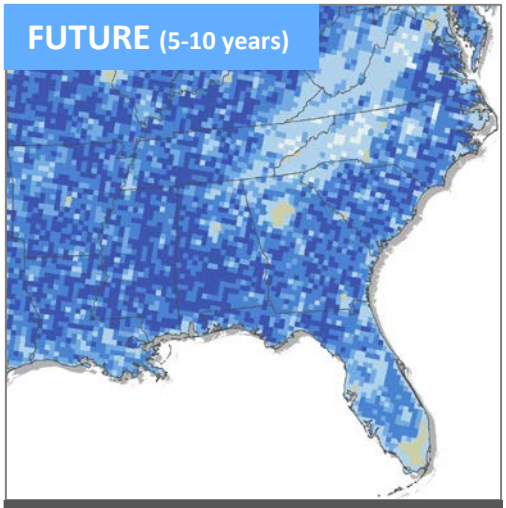
PRESENT



Recently, turbine manufacturers have designed taller towers and longer blades, improving energy output, especially at lower wind speed sites.

110m Height | Current Technology
Potential: 1,747 TWh/year

FUTURE (5-10 years)

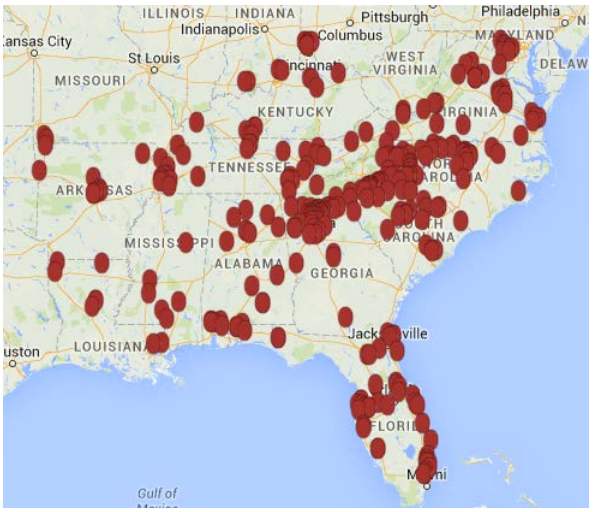


This technology trend is continuing, which significantly increases potentially viable areas for wind energy, especially in the Southeast.

140m Height | Future Technology**
Potential: 6,234 TWh/year

Wind Industry Supply Chain

The Southeast is already home to at least 227 companies and 300 facilities that are involved in the full value chain of the wind energy industry, even though almost no utility-scale wind has been developed in the region.



Supply chain database under development
States included: VA. NC. SC. GA. FL. AL. MS. LA. AR. TN. KY

Southeast Electricity Quick Facts

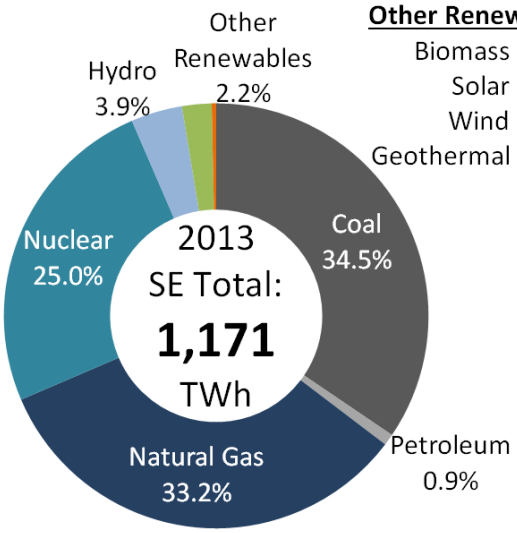
Age of Generators†

COAL
189 plants
(54,880 MW)
over 40 yrs old

NATURAL GAS
98 plants
(18,432 MW)
over 40 yrs old

NUCLEAR
10 plants
(8,939 MW)
over 40 yrs old

† 50MW and larger



Other Renewables
Biomass - 2.2%
Solar - 0.1%
Wind - 0.0%
Geothermal - 0.0%

11-State Region Includes

9 States in the top 20 for total electricity generation

10 States in the bottom 11 for % of electricity from renewables

4 States in the top 10 for % of electricity from coal or gas

WINDExchange
U.S. DEPARTMENT OF ENERGY

SOUTHEASTERN WIND COALITION
SEWIND.ORG

Prepared By: The Southeastern Wind Coalition, The Southeast Wind Energy Resource Center, funded by the U.S. Department of Energy
Data Sources: National Renewable Energy Lab, U.S. Energy Information Administration, SEWC Supply Chain Database
* estimated gross capacity factor greater than 35%. | ** 150 W/m^2 machine

U.S. Wind Energy Information

December 2014

Wind Energy Deployment in the U.S.

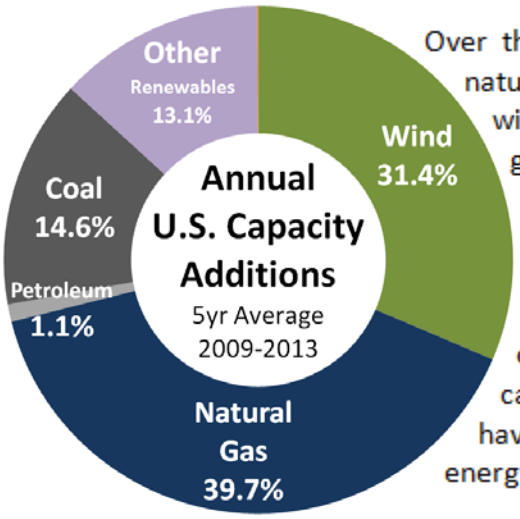
Top 10 Wind States*		
By % of Electricity		
1	Iowa	27.4%
2	South Dakota	26.0%
3	Kansas	19.4%
4	Idaho	16.2%
5	Minnesota	15.7%
6	North Dakota	15.6%
7	Oklahoma	14.8%
8	Colorado	13.8%
9	Oregon	12.4%
10	Wyoming	8.4%
By MW Installed		
1	Texas	12,354
2	California	5,829
3	Iowa	5,177
4	Illinois	3,568
5	Oregon	3,153
6	Oklahoma	3,134
7	Minnesota	2,987
8	Kansas	2,967
9	Washington	2,808
10	Colorado	2,332

61,110 Megawatts installed

71% of congressional districts w/ turbines and/or manufacturing

4.1% of U.S. electricity from wind

* as of the end of 2013



Over the last 5 years, only natural gas has rivaled wind power in electric generating capacity additions. In some regions like the Plains, Midwest, and Northwest, over 60% of new capacity additions have been from wind energy.

Technology Trends Since 2000

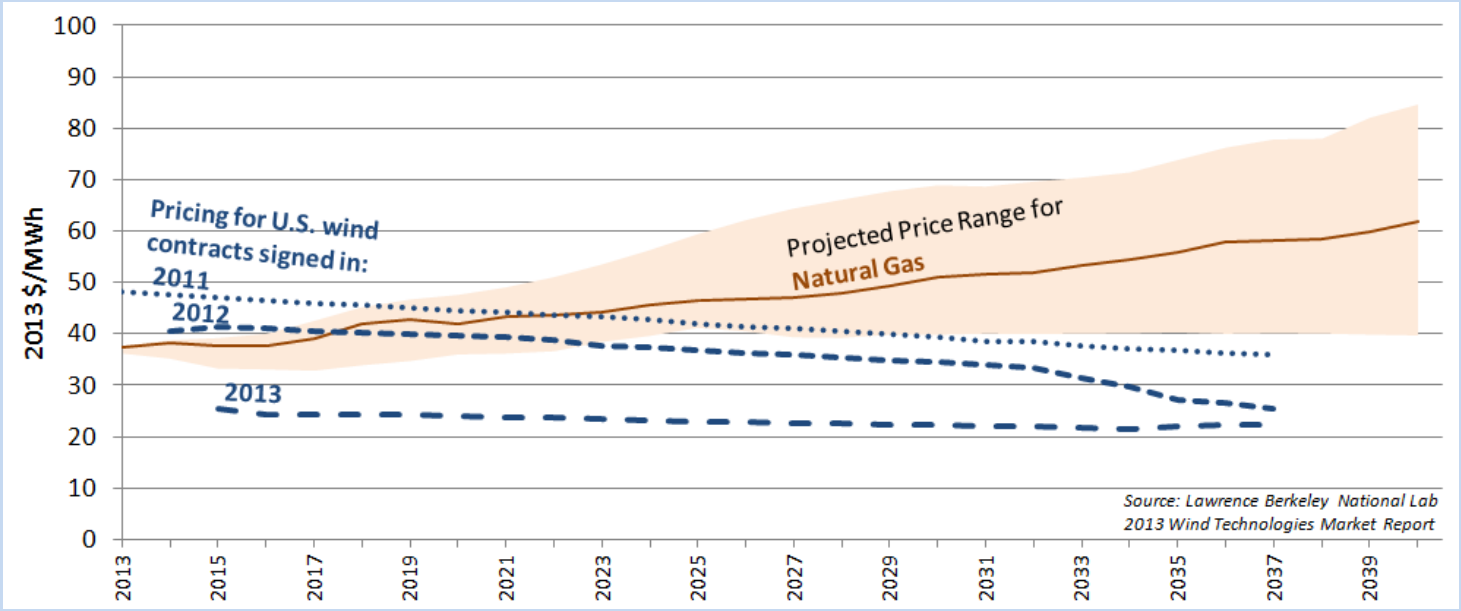
+38% Tower Height

+83% Rotor Diameter

+111% Nameplate Capacity

Wind Energy's Cost

Recent **wind prices** are **competitive** with expected future cost of burning fuel in **natural gas** plants



With no fuel cost and zero emissions, wind power provides **clean energy** with long-term, **stable pricing** and serves as a **financial hedge** against fossil fuel price volatility and potential future carbon pricing or regulations.

WINDExchange U.S. DEPARTMENT OF ENERGY

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