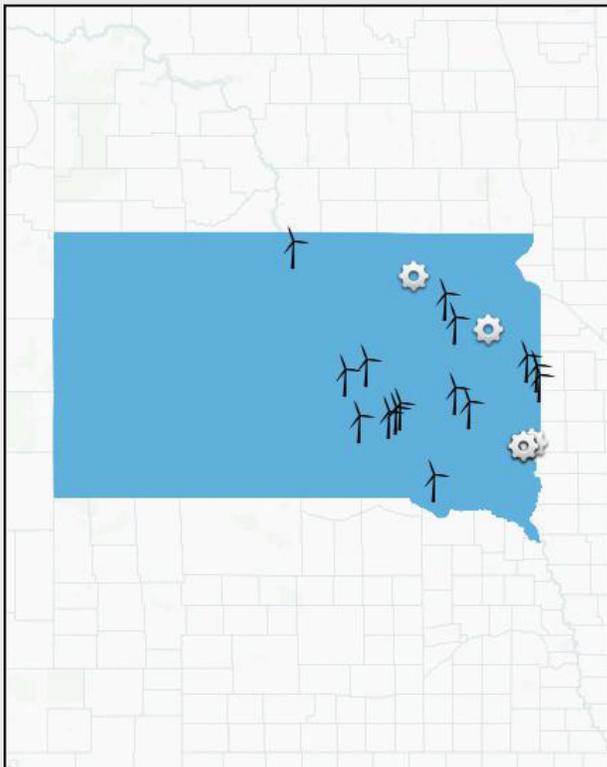


SOUTH DAKOTA WIND ENERGY



Wind energy means economic development for South Dakota.

In a 12 month period through October 2016, South Dakota generated nearly 29% of its electricity from wind power, the third highest in the nation. Yet South Dakota has only developed a small fraction of its strong wind resource potential. Further wind installation will provide considerable economic benefits and allow smaller manufacturers to enter the wind supply chain, joining major industry players such as Marmen Energy, who operate a tower fabrication facility in Brandon.



 Online Wind Project  Manufacturing Facility

Note: Calculations based on national and state averages.

BENEFITS Jobs & Economic

An investment in wind power is an investment in jobs, including jobs in operations and maintenance, construction, manufacturing and many support sectors. In addition, wind projects produce lease payments for landowners and increase the tax base of communities.

- 2015 direct and indirect jobs supported: 1,001 to 2,000
- Total capital investment: \$2.0 billion
- Annual land lease payments: \$1-5 million

Wind-Related Manufacturing

The United States has over 500 manufacturing facilities producing products for the wind industry that range from blade, tower and turbine nacelle assembly facilities to raw component suppliers, including fiberglass and steel.

- Number of active manufacturing facilities in the state: 5

Wind Projects

- **Installed wind capacity: 977 MW**
- **State rank for installed wind capacity: 19th**
- **Number of wind turbines: 583**
- **State rank for number of wind turbines: 19th**
- **Wind projects online: 12**
- **Wind capacity under construction: 90 MW**
- **Wind capacity in advanced development: 104 MW**

Current Wind Generation

For the 12 month period ending October 2016, wind energy provided 28.95% of all in-state electricity production.

- **Equivalent number of homes powered by wind: 227,000**

Wind Generation Potential

The DOE Wind Vision Scenario projects that South Dakota could produce enough wind energy by 2030 to power the equivalent of 895,000 average American homes.

- **Land based technical wind potential at 80 m hub height: 844,019 MW**
- **Land based technical wind potential at 110 m hub height: 466,803 MW** (Source: NREL)

Environmental Benefits

Generating wind power creates no emissions and uses virtually no water.

- **2015 annual state water consumption savings*: 262 million gallons**
- **2015 equivalent number of water bottles saved: 2.0 billion**
- **2015 annual state carbon dioxide (CO₂) emissions avoided: 480,000 metric tons**
- **2015 equivalent cars worth of emissions avoided: 102,000**

*Based on national average water consumption factors for coal and gas plants



Renewable Portfolio Goal

In 2008, South Dakota set a renewable energy target that 10% of all retail electricity sales be obtained from renewable sources by 2015. In 2009, energy efficiency was included as an allowable method to reach the objective. Wind energy has historically been the renewable resource chosen to meet renewable energy targets.