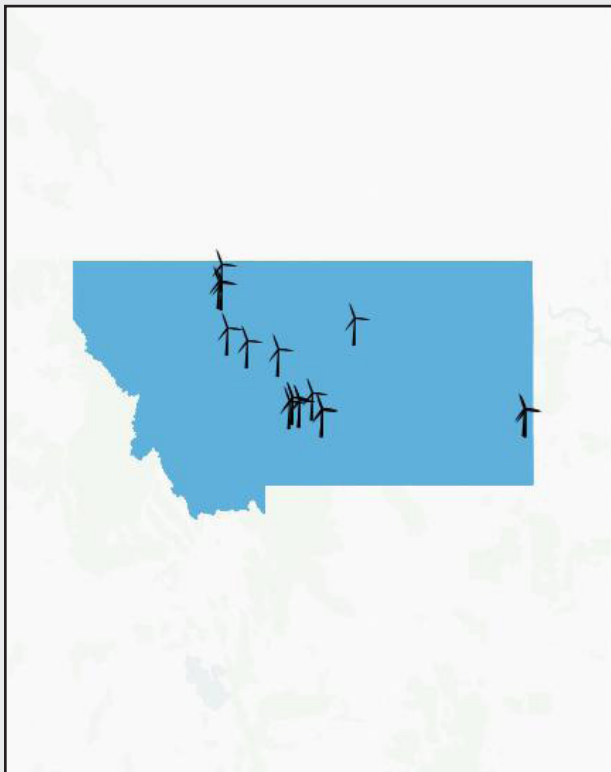


MONTANA WIND ENERGY



Montana is a national leader in wind energy potential.

Montana is one of the top states in the country for potential wind generation. According to NREL data, the state has a technical wind potential of approximately 687,800 megawatts (MW). This potential, combined with manufacturing expertise, could make the state a powerhouse for the wind industry. The state currently has 15 wind projects online, with a total capital investment of \$1.4 billion. Expanding wind power will create even more opportunities for manufacturers and service suppliers.



 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.

- 2016 direct and indirect jobs supported: 501 to 1,000
- Total capital investment through 2016: \$1.4 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: 0

Wind Projects

- **Installed wind capacity:** 695 MW
- **State rank for installed wind capacity:** 22nd
- **Number of wind turbines:** 479
- **State rank for number of wind turbines:** 21st
- **Wind projects online:** 15 (Projects above 10 MW: 9)
- **Wind capacity under construction:** 345 MW
- **Wind capacity in advanced development:** 78 MW

Current Wind Generation

During 2016, wind energy provided 7.57% of all in-state electricity production.

- **Equivalent number of homes powered by wind:** 197,000

Wind Generation Potential

The DOE Wind Vision Scenario projects that Montana could produce enough wind energy by 2030 to power the equivalent of 6.4 million average American homes.

- **Land based technical wind potential at 80 m hub height:** 687,803 MW
- **Land based technical wind potential at 110 m hub height:** 566,977 MW (Source: NREL)

Environmental Benefits

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

- **2016 annual state water consumption savings*:** 909 million gallons
- **2016 equivalent number of water bottles saved:** 6.9 billion
- **2016 annual state carbon dioxide (CO₂) emissions avoided:** 1.6 million metric tons
- **2016 equivalent cars worth of emissions avoided:** 336,000

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



Renewable Portfolio Standard

Montana enacted a renewable portfolio standard (RPS) in 2005 that required utilities to derive 15% of their sales from renewable resources by 2015. Wind energy has historically been the renewable resource chosen to meet RPS requirements, fulfilling 96% of Montana's requirement in 2015.