

# Montana

Renewable electricity in the form of wind energy development means increased economic opportunity in rural Montana. A U.S. Department of Energy Study (*20% Wind by 2030*) concluded that ramping up wind generation to 20 percent of the nation's electricity would create nearly 2,800 long-term jobs in Montana and over 16,000 jobs lasting one to two years resulting from wind turbine construction. Many jobs would be in rural Montana, where opportunities to create new jobs are limited. And many of these jobs are good jobs. A typical wind turbine maintenance job, for example, pays over \$20/hour, *Jobs and Economic Development Impact Model, National Renewable Energy Laboratory*.

In addition, expanding wind generation is projected to increase property tax revenues by \$78.2 million annually for Montana schools and local governments. Montana landowners are projected to receive additional lease payments of \$14 million annually.

## What is the economic impact of wind energy in Montana?

Increasing the national wind power capacity to 20% is projected to increase Montana wind generation capacity to 5,261 megawatts and make Montana a major wind exporter. Montana has exceptional wind resources, the fifth greatest overall potential among the states for wind energy production, according to the U.S. Department of Energy.

The expansion of wind electric generation would generate substantial direct, indirect, and induced economic benefits for Montana. Direct benefits include jobs, land lease payments, and increased tax revenues. Indirect and induced benefits result from local spending due to increased demand for goods and services. Economic benefit drivers include the use of local construction companies, the presence of in-state component suppliers, local wage structures, local property tax structures, and operation and maintenance expenditures. Economic impacts could be further enhanced through the development of a local wind supply, installation, and maintenance industry within the state.

The following charts show some of the economic impact on Montana, if the state were to develop 5,261 MW wind energy by 2030. Data for this analysis was compiled by the National Renewable Energy Laboratory (NREL). Direct impacts result from investment in the planning, development, and operation of new wind facilities. Beneficiaries include landowners, construction workers, operation and management staff, turbine manufacturers, and project managers. Indirect impacts reflect payments made to businesses that support the wind facility and include: banks, component suppliers, and manufacturers of equipment used to install and maintain the facility. Induced benefits result from increased spending by the direct and indirect beneficiaries.

Jobs created in Montana from 5,261 MW of new wind development by 2030 Wind energy's economic "ripple effect"			
	Direct Impacts	Indirect and Induced Impacts	Total Impact
<b>New jobs during construction phase (1-2 years)</b>	8,973	7,915	16,888
<b>New jobs during operational phase—long term jobs (20+ years)</b>	1,424	1,451	2,875
Economic Impacts to Montana from 5,261 MW of new wind development by 2030 Wind energy's economic "ripple effect"			
	Direct Impacts	Indirect and Induced Impacts	
<b>Payment to Landowners per year</b>	\$14 Million		
<b>Local Property Tax Revenue per year</b>	\$78.2 Million		
<b>Benefit to local economy (construction phase 1-2 years)</b>	\$992 Million	\$621 Million	
<b>Benefit to local economy (operational phase 20+ years)</b>	\$111.7 Million/year	\$119 Million/year	

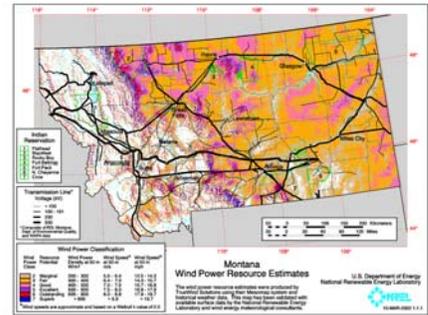
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## What are some of the benefits of wind energy in Montana?

If wind energy deployment gradually increases to 20% of the nation's electricity over the same time period, potentially, four trillion gallons of water will be conserved. Montana and the western states would see a water consumption savings of 1.1 trillion gallons nationally. (DOE 20% Wind Energy by 2030).

## Where is the best wind potential in Montana?

Over two thirds of Montana has excellent wind resources for the development of utility scale wind projects. However, with only 165 MW of installed wind energy capacity (NREL January 2009), Montana has lots of room for growth. This map indicates that Montana has wind resources consistent with utility-scale production. Good-to-excellent wind resource areas are distributed throughout the eastern two-thirds of Montana. The region just east of the Rocky Mountains in northern Montana has excellent-to-superb wind resource, with other outstanding resource areas being located on the hills and ridges between Great Falls and Havre. The region between Billings and Bozeman also has excellent wind resource areas. Ridge crest locations have the highest resource in the western one-third of Montana.



This map indicates that Montana has significant wind resources consistent with utility-scale production. (The darker the color the greater the potential.) This map can be found at [www.windpoweringamerica.gov/images/windmaps/ks\\_50m\\_800.jpg](http://www.windpoweringamerica.gov/images/windmaps/ks_50m_800.jpg).

## Renewable Portfolio Standards

Montana implemented its renewable portfolio standard in April of 2005. The standard requires all public utilities to obtain specific percentages of their electricity from qualified renewable energy resources:

- 5% by 2008
- 10% by 2010
- 15% by 2015.

Montana's renewable energy standard has plans in place to stimulate rural economic development. Public utilities must purchase a certain amount of renewable energy credits and the electricity output from community-based energy developments in accordance to the following time frames:

- 2010-2014: 50MW purchased
- For every year following 2015, 75 MW must be purchased.

Cooperative utilities and municipal utilities with less than 5,000 customers are exempt from these requirements, but those that exceed 5,000 customers must implement a renewable energy standard. The standard must promote renewable energy and rural economic development.