

Wind Power Economic Impacts

wind power

Wind power impacts Wisconsin's state and local economies. Wind power provides jobs, tax revenues, and lease payments to landowners, and keeps energy dollars in the state.

JOBS NOW AND IN THE FUTURE

Wisconsin is already home to two companies that have been important manufacturers for the wind industry: Marathon Electric and Milwaukee Drive. These two companies have had as many as 60 employees making generators and gearboxes for wind turbine companies like Enron Wind Corporation and Kenetech Corporation. Wisconsin's existing wind farms in Kewaunee County employed 30 people during their construction and two more for operations and maintenance.

A 1994 study by the Wisconsin Energy Bureau looked at displacing 750 megawatts of coal and natural gas power plants with renewable resources — especially wood and wind. This would produce enough power for over 300,000 homes, while creating 2,600

new jobs, \$1.6 billion in higher disposable income and a \$3.1 billion increase in gross regional product than conventional power plant investments. This economic gain includes the effects of higher electricity prices resulting from the use of more expensive renewable energy resources.

EXPORTED DOLLARS

Since Wisconsin produces no conventional fuels, we must import over \$6 billion worth of coal, natural gas, uranium and gasoline every year. To put that in perspective, Wisconsin produced \$3.5 billion worth of dairy products in 1998. Using Wisconsin's wind energy keeps money in the state economy. Keeping money in the state means



Building wind turbines and generating electricity with them here in Wisconsin will create jobs in the state and benefit Wisconsin's economy.

more economic activity here and more jobs here. Economists call this a "multiplier effect."



fuels... Capturing cost effective opportunities to increase use of Wisconsin's renewable resources will create quality jobs and reduce environmental impacts."

"While Wisconsin is richly endowed with many natural resources, 96 percent of our energy supply is imported. In 1994, we spent \$8.6 billion on energy, with over \$6 billion leaving the state to pay for imported petroleum, natural gas, coal and nuclear

— Governor Tommy G. Thompson,
"Fueling a Competitive Economy: Energy Policy for Wisconsin's Future"

For example, if we buy wind-generated power from a wind farm in Kewaunee County, some of that money goes to the dairy farmers there who lease their land for the turbines. Those farmers can use that money to produce more milk, which is sold to a cheese factory in Green Bay, which sells cheese to stores in Waupaca, and so on. Each step produces income and creates jobs. If we buy coal-generated power, our utility buys the coal from a mining company in Wyoming, which uses the money to pay for strip mining equipment made in Ohio, and so on. That creates jobs too, but not in Wisconsin.



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A few wind turbines can bring a steady income to landowners, without sacrificing large areas of land. Wind turbines use a small percentage of farm land they're on, leaving the rest for crops and grazing.

Each wind turbine displaces 954 tons of coal each year, enough coal to fill 9.5 train cars. That keeps \$19,069 per year in the state in fuel costs alone. There are currently 35 such wind turbines in Wisconsin.

Of course, much of the cost of a wind farm is in the wind turbines themselves, and most of the turbines in Wisconsin so far have been made in Denmark. If we made more of the turbines here, we could capture even more jobs.

LOCAL COMMUNITIES

Wind power development can provide an important boost to rural communities in the form of tax payments. The towns of Lincoln and Red River, for example, are home to 31 wind turbines owned by Wisconsin Public Service and Madison Gas & Electric. Total tax payments to the towns add up to \$1.7 million over 30 years, or about \$57,000 per year. This is an increase of 7 percent

for the town's total budget. Kewaunee County receives an additional \$1.875 million over 30 years, or \$62,500 per year.

A proposed 33-turbine wind farm near the town of Addison would make tax payments of \$3 million over 25 years.

FARMERS AND LANDOWNERS

Farmers and rural landowners stand to benefit directly from wind power in Wisconsin. While contracts vary, wind developers typically pay a royalty to landowners of about \$2,000 per year. Since a single wind turbine typically uses only a half acre of land (including access roads), this can be a substantial return compared to crops or livestock. Turbines do have to be spread out, however, at about one turbine per five acres, to avoid causing turbulence for downwind turbines. But since the wind turbines use only 10 percent of that space, the rest is available for crops and grazing.

For farmers who depend on the ups and downs of prices for crops and dairy products, the steady income from a few wind turbines can be an important boost.

FOR MORE INFORMATION

Steve Clemmer and Don Wichert, *The Economic Impacts of Renewable Energy Use in Wisconsin*, Wisconsin Department of Administration, Energy Bureau, April 1994.

Karen Conover, RLA Consulting, *The Effect of Wind Energy Development on State and Local Economies*, National Wind Coordinating Committee, 1997. Online at www.nationalwind.org.



Visit the Energy Center of Wisconsin's wind power web site at www.wind.ecw.org or call 608.238.4601

ABOUT US

The Energy Center of Wisconsin is a private nonprofit organization dedicated to improving energy efficiency and renewable energy in Wisconsin. Funded in part by Wisconsin utilities, the Center invests \$5 million annually in energy efficiency research, education and demonstrations aimed at residents, business and government.