



Wind Energy Is Good for Pennsylvania's Economy

By capturing one of Pennsylvania's most bountiful natural resources - the wind - and turning it into clean electricity, the Commonwealth create new economic opportunities, create high quality jobs, tax payments to local governments, and lease payments to farmers. Moreover, shifting a significant portion of generation to wind energy can help reduce state's dependence on strip mining and burning coal.

Rural areas in Pennsylvania are facing hard times. Commodity prices are at record lows, the rural population continues to decline, and small family farms are increasingly consolidating into large factory farms, resulting in less employment.

One answer to these problems is wind energy. Wind energy can boost the rural economy, diversify rural incomes and create affordable pollution-free power. Wind power is the fastest growing source of electricity in the world, with sales growth averaging 40% per year for the last five years. In 2000, turbine sales reached nearly \$4 billion world wide, and industry forecasters expect total installed capacity to triple over the next five years. Thanks to major new wind developments Somerset, Fayette, and Lackawanna Counties, Pennsylvania is part of this clean energy revolution. With a sustained effort, Pennsylvania could be a leader in this dynamic global economy.

"It is not a question of choosing between the environment or jobs. Wind farms are good for both of them. A field of dreams for me is a field of wind machines, and if we build them I believe jobs will come."

— Janet Johnson,
late Minnesota state senator

- **A Steady, Supplementary Income for Farmers** – Wind power means a direct income for farmers who lease their land for wind turbines. Struggling Pennsylvania farmers can earn \$2,000-3,000 per turbine per year, while removing less than half an acre from agricultural production for each tower. Each 100 MW of wind capacity represents \$260,000 in annual payments to landowners. Given current commodity prices, farmers could actually earn more from a few wind turbines than from dozens of acres of crops or hundreds of hogs.
- **Rural Economic Development for Pennsylvania** – Over the next two years, the American wind industry expects to install over \$170 million worth of equipment in rural Pennsylvania. The major new wind farms will result in tax payments to counties and school districts of \$1.2 million per year.
- **Cleaner Air for Pennsylvania / Reducing Greenhouse Gases** – Wind energy displaces harmful emissions from fossil fuels. Pennsylvania's currently installed 10.6 megawatts of wind power reduce acid rain emissions (sulfur dioxide) by 220 tons per year, smog emissions (nitrogen oxides) by 70 tons per year, and greenhouse gas emissions (CO₂) by 26,000 tons per year. These cuts in global warming emissions are equivalent to eliminating the pollution from 3,000 sport utility vehicles, or

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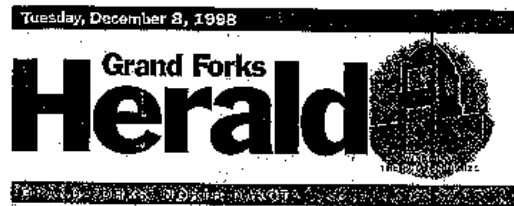
about 9,500 compact passenger cars. If wind power supplied 10% of Pennsylvania's electricity needs by 2010, greenhouse gas emissions would be reduced by nearly 15 million tons per year.

- **A Value-added Product for Pennsylvania** – Wind energy is a value added product for Pennsylvania, just like ethanol. Blending 10% renewable power into Pennsylvania's energy mix is just like blending 10% corn ethanol into gasoline to make gasohol. No modifications are needed to the utility's "engine," the air is cleaned, and economic development is boosted.
- **Jobs for Pennsylvania** – As Pennsylvania's wind energy resources are developed, temporary construction jobs and permanent operation and maintenance jobs will be created. During the 5 months of construction of Green Mountain Energy's Garrett wind farm, a dozen contractors and 10 local general laborers were hired to assist with construction. Each 100 MW of wind development represents 75 short-term and 45 long-term jobs. In addition, wind projects will support a whole range of new companies to service the wind industry.

Wind energy promises to be a large source of new manufacturing jobs in the 21st Century. Pennsylvania's industrial areas are ideally suited for turbine manufacturing to supply the mid-Atlantic's exploding wind industry. LM Glasfiber, a wind turbine blade manufacturing plant in Grand Forks, North Dakota – with 130 full time employees – is an example of the kind of business that could be attracted by Pennsylvania's wind industry.

Harvesting Pennsylvania's wind energy potential also means keeping more energy dollars in the local community, and capturing the "multiplier effect" of income. Local construction contracts generally comprise 20% of the cost of wind farms, so a 15 MW facility can generate about \$3 million in business for local contractors.

A study done for the Iowa Energy Bureau found that if renewables supplied 10% of Iowa's energy for transportation, electricity and heating energy, the state would enjoy a net gain of over about 940 jobs, an increase of over \$300 million in disposable income, and substantially reduced air pollution. A recent report by PennFuture, [Tax Policies for Energy Security, Job Creation and Environmental Quality](#), found that 1,000 MW of wind power would supply 2% of Pennsylvania's electricity and create similar economic and environmental benefits. An aggressive campaign to reach 10% wind power in the state would multiply Pennsylvania's benefits significantly.



130 jobs blow into GF

Denmark wind turbine blade manufacturer plans to open plant

By Sam Hirsch
Herald Staff Writer

The world's largest manufacturer of wind turbine blades is coming to Grand Forks, bringing with it at least 130 new jobs.

Denmark-based LM Glasfiber Inc. plans to begin making wind turbine rotor blades at a new building in the Grand Forks Industrial Park by March 15, according to Craig Eberhart, a spokesman for the company.

The Dowry, from the Grand Forks Region Economic Development Corp., was one of the people who helped land the plant in Grand Forks.

"This is a big deal that's a real point of pride," Eberhart said. "There are a lot of other countries that are interested in Grand Forks and we're excited about it."

Eberhart said the company will use job services of North Dakota to help hire 130 workers who will earn starting salaries of about \$10 per hour plus benefits. In the next few weeks, they will begin hiring more workers and about 20 contractors. By the end of next summer, it may add an additional 60 more jobs.

"This plant in this area is going to add 130 jobs to the economy," Eberhart said. "The plant has a top end hourly wage structure, so Grand Forks will be able to attract people who, within a year, it also will include additional people's development."

The Grand Forks plant will produce 200 megawatts of wind energy each year. The blades will be shipped to special trucks to the wind farms in North America. The Grand Forks plant also produces blades for China and South America as well as markets

down in Florida and...
Hirsch, the chief executive officer of Ed...
incentives in Grand Forks, said the loca...
primarily was based on the relationship...
financial and tax incentives to get it off...
ground.

In the 1990s and early 2000s, the two plan...
the were established, but the market only...
Florida and it stopped producing wind tur...
blades in North and Florida, which now ma...
Florida, Nevada and plastic product se...
near and up as a supplier to the LM plant, I...
no deal between the companies has be...
reached.

JG 12/8; See Page 7A

Grand Forks Herald, Tuesday, December 8, 1998

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Cumulative Net Effects on Jobs, Landowner Payments, Taxes and Air Emissions of Supplying 10% of Pennsylvania's Electricity with Wind by 2010

	Short-term Construction Jobs	Permanent O&M Jobs	Payments to Landowners	County Tax Revenues	Emissions Avoided (tons)		
					CO ₂	NO _x	SO ₂
5,000 MW of wind	3,750	2,250	\$13 million	\$35 million	14.8 million	38,000	125,000

For more information, contact AWEA at windmail@awea.org or 202-383-2500, visit our web site at www.awea.org/pennsylvania, or write us at 122 C Street, NW, Washington, DC 20001.