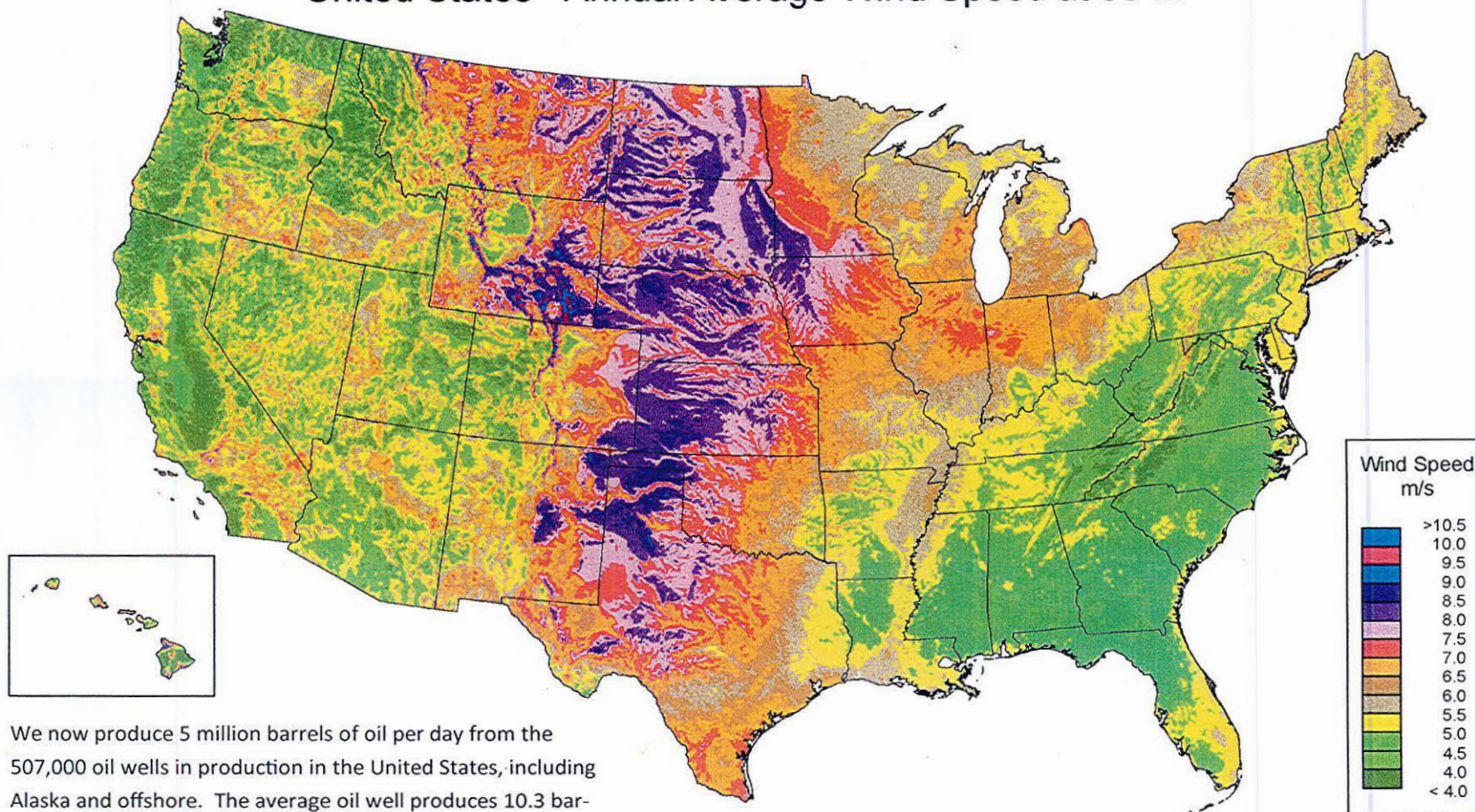


EL-19-003 Jim Nichols

-Lake Benton, MN 56149

United States - Annual Average Wind Speed at 80 m



We now produce 5 million barrels of oil per day from the 507,000 oil wells in production in the United States, including Alaska and offshore. The average oil well produces 10.3 barrels per day. At full production, a 2 megawatt turbine produces as much energy as 28 barrels of oil per day with an average of 12 barrels per day. The conversion factor for wind is 3,412 BTU per kwh and for oil is 5,800,000 BTU per barrel. With 500,000 wind turbines, we can produce as much energy as we now produce from oil in America.

Source: Wind resource estimates developed by AWS Truepower, LLC for windNavigator®. Web: <http://www.windnavigator.com> | <http://www.awstruepower.com>. Spatial resolution of wind resource data: 2.5 km. Projection: Albers Equal Area WGS84.



AWS Truepower
Where science delivers performance.



NREL
NATIONAL RENEWABLE ENERGY LABORATORY

01-APR-2017 2:11

WIND DELIVERS TAX RELIEF IN MINNESOTA

*Minnesota benefits from \$7.1 billion in capital investments from wind energy.
Minnesota landowners receive estimated lease payments of >\$10 million, annually.
25 Minnesota counties benefit from more than \$12 million in Production Tax revenue.*

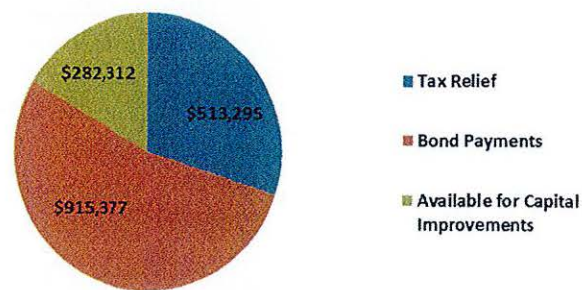
Wind Energy Production Tax

County	Production in 2016 Taxes Payable 2017 Tax Dollars	Production in 2017 Taxes Payable 2018 Tax Dollars
Becker	\$ 13,157	\$ 12,203
Clay	\$ 197,988	\$ 183,614
Cottonwood	\$ 533,487	\$ 748,116
Dodge	\$ 184,980	\$ 189,375
Faribault	\$ 159,293	\$ 151,313
Freeborn	\$ 689,628	\$ 679,523
Grant	\$ 78,209	\$ 70,969
Jackson	\$ 1,991,885	\$ 2,202,936
Lincoln	\$ 1,003,774	\$ 1,084,569
Lyon	\$ 72,966	\$ 65,733
Martin	\$ 374,964	\$ 351,133
Meeker	\$ 133,186	\$ 113,092
Mower	\$ 2,373,932	\$ 2,375,055
Murray	\$ 1,382,798	\$ 1,323,936
Nobles	\$ 1,149,262	\$ 1,113,006
Pipestone	\$ 592,809	\$ 572,715
Redwood	\$ -	\$ 3,247
Rock	\$ 847,949	\$ 825,431
Sherburne	\$ 107	\$ 102
St. Louis	\$ 56,578	\$ 67,913
Stearns	\$ 30,040	\$ 378,954
Steele	\$ 155,518	\$ 157,652
Todd	\$ 1,599	\$ 1,383
Watsonwan	\$ 39,076	\$ 33,848
Winona	\$ 4,227	\$ 3,290
TOTAL	\$ 12,067,411	\$ 12,709,108

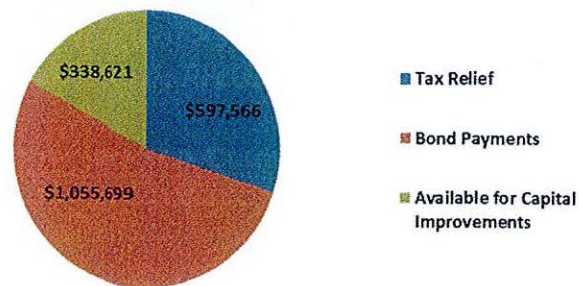
Minnesota Department of Revenue
Property Tax Division
April 2018

Here's how Jackson County Benefits from its annual wind production tax revenue in 2016-2017:

2016



2017



Jackson County chose to divide their revenue this way:
30% -- tax relief
16% -- capital improvements
53% -- bond payments

This is a new source of revenue that **does not come from the pocketbooks of the citizens**, allowing counties to **reinvest in themselves** as they see fit.

One Quarter of the State's Counties Receive This Revenue!

ADDRESS
570 Asbury Street, Suite 201, St. Paul, MN 55104

OFFICE
651.644.3400

WEB
CleanGridAlliance.org

WIND ENERGY IN MINNESOTA

Minnesota is a national leader in the wind energy industry.

Minnesota ranks seventh in the country for installed wind capacity, with a total capital investment of \$7.1 billion. In 2017, wind power generated over 18 percent of Minnesota's electricity, ranking seventh in the nation for wind energy as a share of total electricity generation. The state has also been successful in attracting investment for wind energy manufacturing, with at least 20 active manufacturing facilities in the state. Major wind energy construction companies Blattner Energy and Mortenson Construction are both based in Minnesota.

BENEFITS

Jobs & Economic Benefits

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.

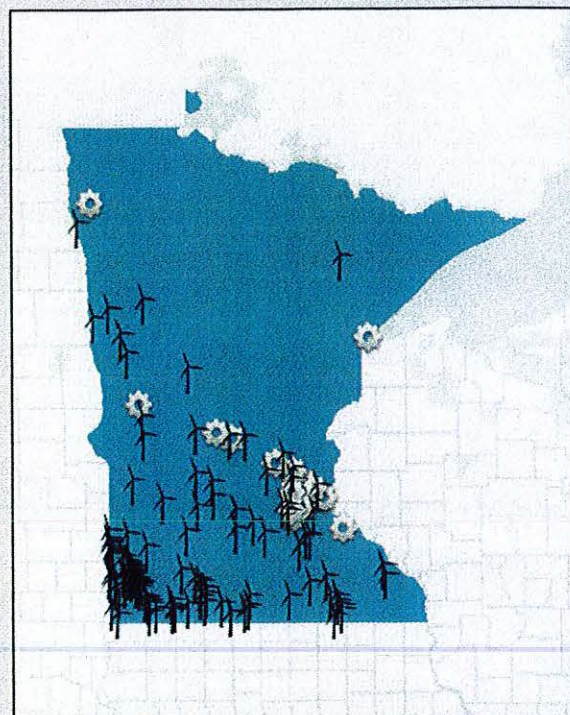
- 2017 direct and indirect jobs supported: **3,001 to 4,000**
- Total capital investment through 2017*: **\$7.1 billion**
- Annual land lease payments*: **\$10 - \$15 million**

*Calculations based on national and state averages.

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: **20**



Online Wind Project

Manufacturing Facility

POWERED
BY

WindIQ

AWEA