



Economic Development Impacts of 1000MW of Wind Energy in Nebraska

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Wind Energy's Economic Impacts

JEDI Model Version W1.09.03e

Wind energy's economic "ripple effect"

Project Development & Onsite Labor Impacts



- Construction workers
- Management
- Administrative support
- Cement truck drivers
- Road crews
- Maintenance workers
- Legal and siting

Local Revenue, Turbine, & Supply Chain Impacts

- Blades, towers, gear boxes
- Boom truck & management, gas and gas station workers;
- Supporting businesses, such as bankers financing the construction, contractor, manufacturers and equipment suppliers;
- Utilities;
- Hardware store purchases and workers, spare parts and their suppliers

Induced Impacts

Jobs and earnings that result from the spending supported by the project, including benefits to grocery store clerks, retail salespeople, and child care providers

Construction Phase = 1-2 years
Operational Phase = 20+ years

Project Development & Onsite Labor

Sample job types

- Truck driving
- Crane operation, hoisting, rigging
- Earth moving
- Pouring cement
- Management, support
- Siting.

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Local Revenues, Turbine, & Supply Chain



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- Steel mill jobs, parts, services
- Equipment manufacturing & sales
- Blade & tower manufacturers
- Property taxes, financing, banking, accounting.



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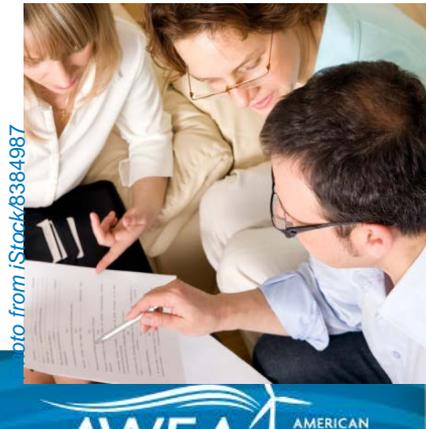


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Induced Impacts



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Increased revenue means people spend money in the local area on goods and services from *sandwich shops, child care providers, grocery stores, clothing and other retail outlets, public transit, car dealerships, restaurants, medical provi*



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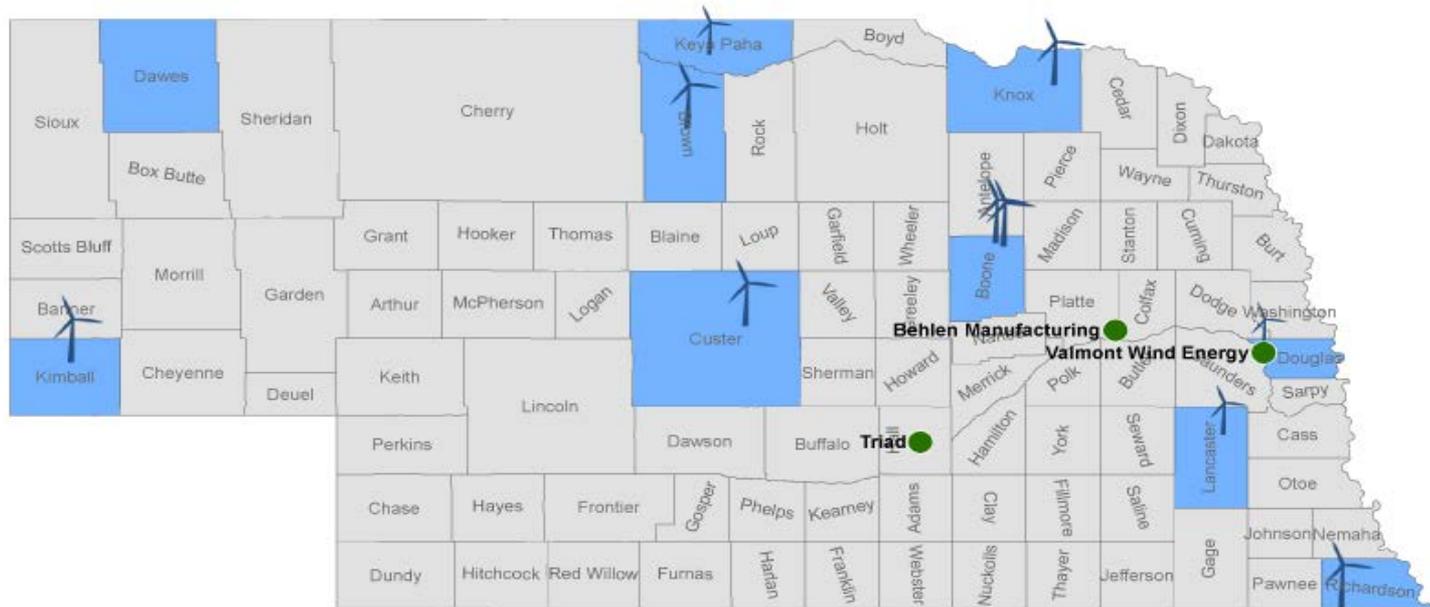


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Nebraska Wind Projects



The JEDI Model estimates jobs and other economic impacts from new wind development

www.nrel.gov/analysis/jedi

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The Jobs and Economic Development Impact (JEDI) models are user-friendly tools that estimate the economic impacts of constructing and operating power generation and biofuel plants at the local and state levels. First developed by NREL's [Wind Powering America](#) program to model wind energy impacts, JEDI has been expanded to analyze concentrating solar power, biofuels, coal and natural gas power plants.

On this site, you can [download](#) the models for free, learn more about how JEDI [works](#), understand the [output](#), and get [answers](#) to questions about using the model.

Contact

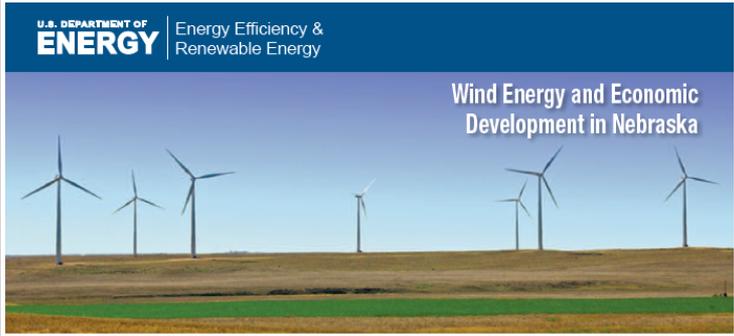
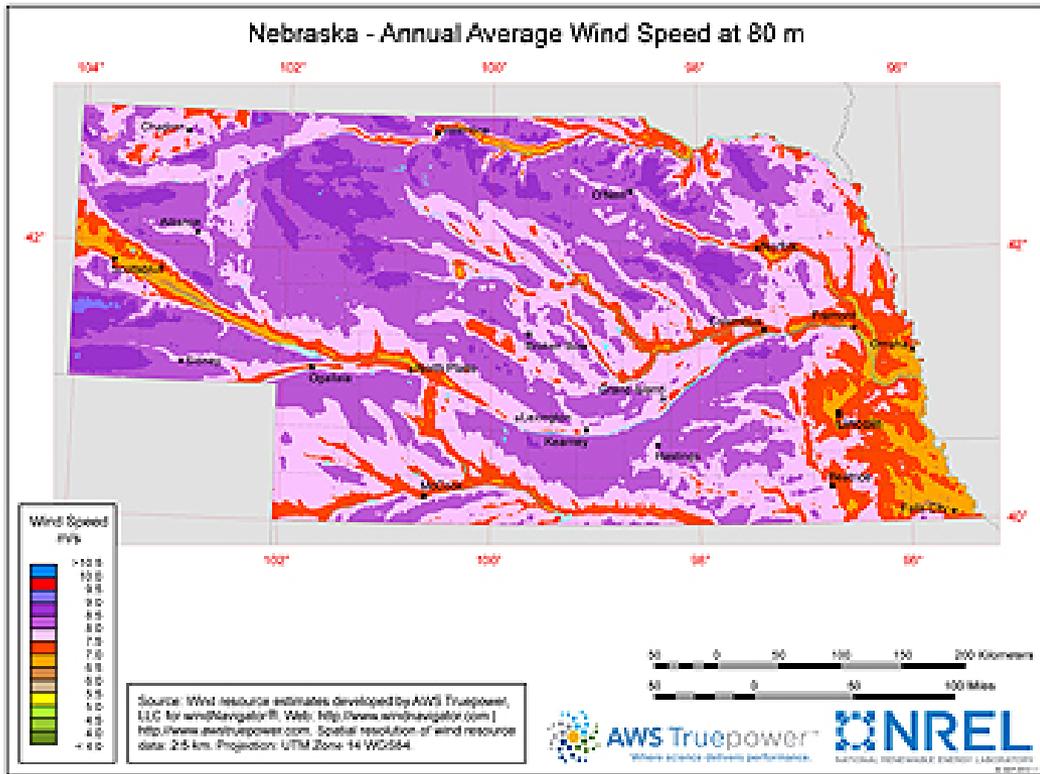
For questions regarding the JEDI models or model updates, please contact: JEDIsupport@nrel.gov

JEDI Fact Sheet

JEDI: Jobs and Economic Development Impacts Model

(PDF 444 KB)
[Download Acrobat Reader](#)

Nebraska



This fact sheet summarizes a recent report by the National Renewable Energy Laboratory (NREL), Economic Development Benefits from Wind Power in Nebraska: A Report for the Nebraska Energy Office, which focuses on the estimated economic development impacts in Nebraska from development and operation of wind power in the state as envisioned in the U.S. Department of Energy's (DOE's) report, 20% Wind Energy by 2030.

Wind power is one of the fastest-growing sources of new electricity generation in the country. It constituted more than 35% of new U.S. electric generating capacity in 2007. In 2008, the United States became the world leader in energy generated from wind power. At the national level, common wind power drivers include Renewable Portfolio Standards (RPS), the federal production tax credit (PTC), and economic development impacts.

A recent report by the U.S. Department of Energy concludes that it is feasible for the United States to derive as much as 20% of its electricity from wind power by 2030 (<http://20percentwind.org/>). This groundbreaking analysis details how the country could achieve this ambitious goal and shows where wind energy is expected to be deployed based on demand for electricity, the distribution of wind resources across the country, and the cost and availability of transmission. Under this national 20% wind scenario, 7,800 megawatts (MW) of new wind power is added in Nebraska.

Explaining the Range of Impacts from Four Scenarios
This analysis uses four scenarios — 1,000 MW, 7,800 MW, community-based project, or non-community-based project — to represent two different amounts of wind energy development and two different estimates of how much local investment will occur under Nebraska's Community-Based Energy Development (C-BED) policy. This policy is expected to have a significant impact on economic development.

Economic Development Impacts Under Four Scenarios

Direct Impacts*	1000 MW Low C-BED	1000 MW High C-BED	7,800 MW Low C-BED	7,800 MW High C-BED
Construction-period employment (short-term jobs)	1,228	2,177	10,301	17,795
Construction-period economic output (millions)	\$150	\$308	\$1,724	\$3,238
Operations-period employment (long-term jobs)	141	290	1,166	2,209
Operations-period economic output (million \$/yr)**	\$18	\$33	\$144	\$255
Total Impacts (Direct, Indirect, and Induced)				
Construction-period employment (short-term jobs)	2,316	4,190	20,626	36,508
Operations-period employment (long-term jobs)	264	515	2,171	4,038
Average annual employment impacts (jobs supported on average over the facility's lifetime)**	345	659	1,690	2,925
Average property tax revenue (million \$/yr)**	\$3.3	\$3.3	\$14	\$14
Lifetime economic output (millions)***	\$888	\$1,640	\$7,800	\$14,100

*Low results represent the traditional development low scenario. High results represent the C-BED high scenario. All dollar values are millions of constant 2008 dollars.
 **When the total capacity is operating.
 ***Average annual impacts for 7,800 MW assume a 20-year construction period and 20 years of operations for a total lifetime impact spread over 40 years. Average annual impacts for 1,000 MW assume a 2-year construction period and 20 years of operations for a total impact spread over 22 years.
 ****Lifetime includes construction and 20 years of operations.



Nebraska Economic Impacts

from 1,000 MW of New Wind Development

Wind Energy's Economic "Ripple Effect"

Direct Impacts

Payments to Landowners:

- \$2.7 million/year

Local Property Tax Revenue:

- \$3.9 million/year

Construction Phase:

- 1,634 new jobs
- \$188.5 million to local economies

Operational Phase:

- 260 new long-term jobs
- \$21.2 million/year to local economies



Indirect & Induced Impacts

Construction Phase:

- 1,664 new jobs
- \$149.1 million to local economies

Operational Phase:

- 191 local jobs
- \$18.4 million/year to local economies

Totals (construction + 20 years)

Total economic benefit = \$1.1 billion

New local jobs during construction = 3,298

New local long-term jobs = 451

Construction Phase = 1-2 years

Operational Phase = 20+ years



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