

WIND ENERGY IN IOWA



Iowa is a national leader in the wind energy industry.

Iowa generated nearly 42% of its electricity from wind power in 2019, ranking first in the nation for wind energy as a share of total electricity generation and generating enough electricity to power the equivalent of more than 2.4 million average American homes. Iowa also ranks second in the nation for installed capacity with over 10,600 MW of wind online, representing \$19 billion in capital investment. The state has attracted investment from major wind industry players including turbine and blade manufacturer Siemens Gamesa Renewable Energy and blade manufacturer TPI Composites. Thanks to companies like these, Iowa is home to over 9,000 wind industry jobs.

BENEFITS Jobs & Economic Benefits

The U.S. wind industry is a major economic development driver. In addition to job creation and billions of dollars in project investment, the wind industry invests heavily in local communities, providing significant revenue in the form of property, state, and local taxes.

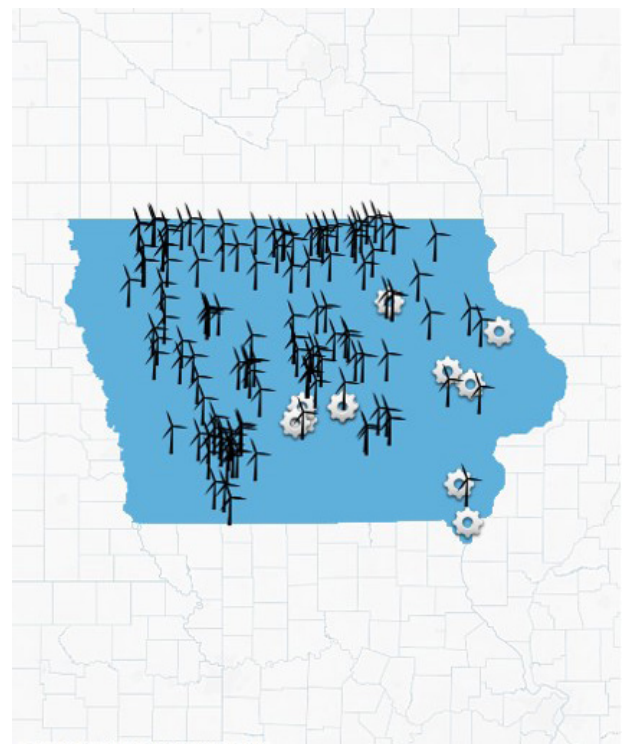
- Direct wind industry jobs in 2019: **9,001 to 10,000**
- Capital investment in wind projects through 2019*: **\$19.0 billion**
- Annual state and local tax payments by wind projects: **\$61 million**
- Annual land lease payments: **\$69 million**

*Source: Based on state and national averages from LBNL, NREL

Wind-Related Manufacturing

Over 500 manufacturing facilities in the U.S. make products for the wind industry, from blades, towers, and turbine nacelles to raw components such as fiberglass and steel.

- Number of active manufacturing facilities in the state: **11**



Online Wind Project



Wind-related Manufacturing Facility

Wind Projects as of Q1 2020

- Installed wind capacity: **10,664 MW**
 - » State rank for installed wind capacity: **2nd**
- Number of wind turbines: **5,590**
 - » State rank for number of wind turbines: **3rd**
- Wind projects online: **118** (Projects larger than 10 MW: 66)
- Wind capacity under construction: **1,212 MW**
- Wind capacity in advanced development: **0 MW**

Wind Generation

In 2019, wind energy provided **41.90%** of all in-state electricity production.

- State rank for share of electricity: **1st**
- Equivalent number of homes powered by wind in 2019: **2,436,500**

Wind Energy Potential

- Land-based technical wind potential at 80 m hub height: **279,568 MW**
(Source: AWS Truepower, NREL)

Environmental Benefits

Wind energy reduces emissions and water consumption by avoiding generation from fossil-fuel power plants.

- In-state carbon dioxide emissions avoided in 2019*: **12.6 million metric tons**
 - » Equivalent cars' worth of emissions avoided: **2.7 million**
- In-state water consumption savings in 2019**: **7.1 billion gallons**

*Estimated using Aurora power sector model.

**Based on national average water consumption factors for coal and gas plants.

Renewable Portfolio Standard

Iowa became the first state to adopt a renewable portfolio standard when it passed a law in 1983 requiring its major utilities to own or contract 105 MW of renewable energy. Iowa met the requirement in 1999 and has significantly exceeded the requirement since then.

