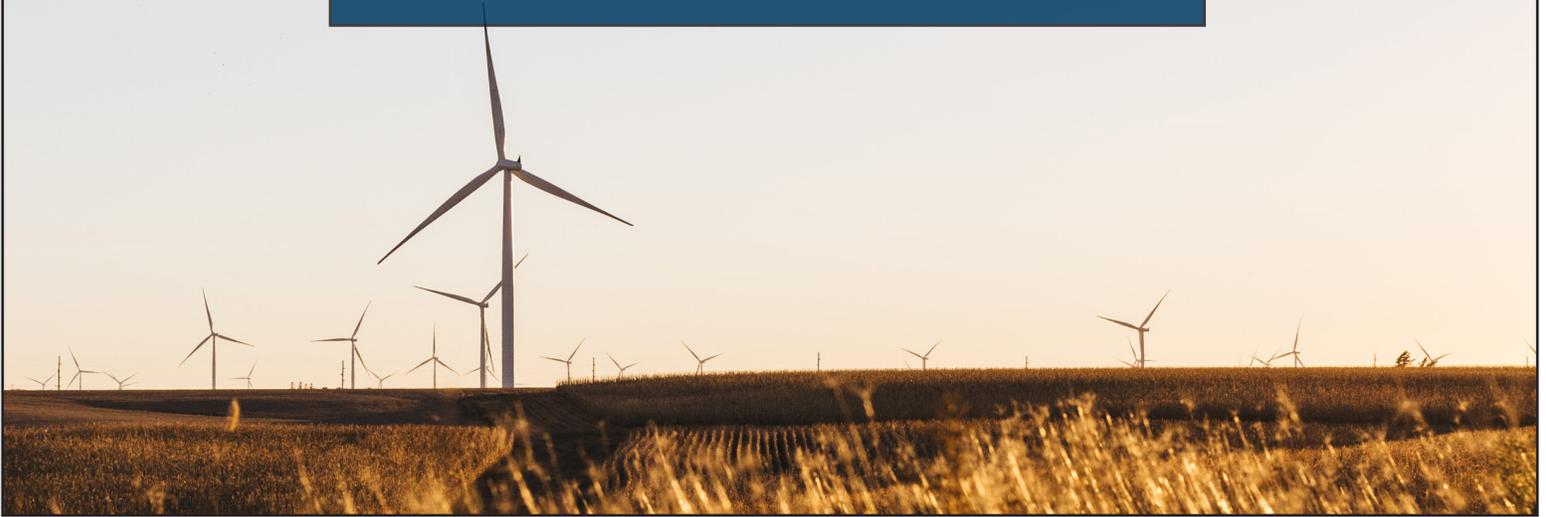


# WIND ENERGY IN IOWA



## Iowa is a national leader in the wind energy industry.

Iowa now generates 37% of its electricity from wind power, 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 1.9 million average U.S. households. Iowa also ranks third in the nation for installed capacity and is a leader in wind manufacturing. Iowa is home to two major blade manufacturers, Siemens and TPI Composites. These facilities have created investment and opportunity throughout the wind energy supply chain for Iowa manufacturers.

## 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.

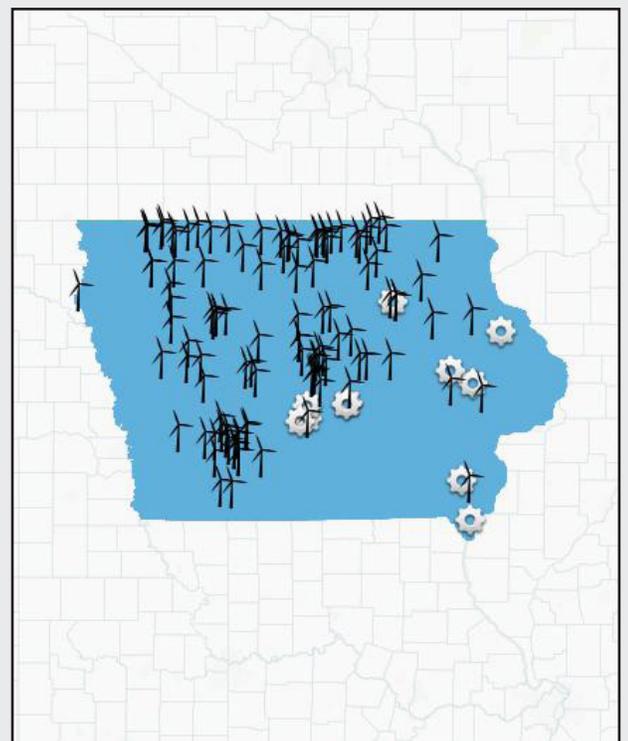
- 2017 direct and indirect jobs supported: **7,001 to 8,000**
- Total capital investment through 2017\*: **\$14.2 billion**
- Annual land lease payments\*: **\$20 - \$25 million**

\*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: **10**



 Online Wind Project     Manufacturing Facility

POWERED BY **WindIQ**

**AWEA** 

## Wind Projects as of 3Q 2018

- Installed wind capacity: **7,312 MW**
  - » State rank for installed wind capacity: **3rd**
- Number of wind turbines: **4,145**
  - » State rank for number of wind turbines: **3rd**
- Wind projects online: **107 (Projects above 10 MW: 53)**
- Wind capacity under construction: **2,582 MW**
- Wind capacity in advanced development: **1,802 MW**

## Wind Generation

During 2017, wind energy provided **36.9%** of all in-state electricity production.

- State rank for share of electricity: **1st**
- Equivalent number of homes powered by wind in 2017: **1,935,000**

## Wind Energy Potential

- Land-based technical wind potential at 80 m hub height: **279,568 MW**  
(Source: AWS Truepower, NREL)
- Offshore net technical wind potential at 100 m hub height: **NA MW** (Source: NREL)

## Environmental Benefits

Generating wind power creates no emissions and uses virtually no water.

- 2017 annual state water consumption savings\*: **4.8 billion gallons**
- 2017 equivalent number of water bottles saved: **36.3 billion**
- 2017 annual state carbon dioxide (CO<sub>2</sub>) emissions avoided: **8.8 million metric tons**
- 2017 equivalent cars' worth of emissions avoided: **1.9 million**

\*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.