

WIND ENERGY IN PENNSYLVANIA



Pennsylvania is a national leader in wind-related manufacturing.

Pennsylvania is a manufacturing leader for the wind energy industry, with at least 30 manufacturing facilities producing components for the wind industry and providing high quality jobs. Pennsylvania currently has 24 wind projects online, representing a capital investment of \$2.9 billion. Wind projects in the state generated enough electricity in 2018 to power 347,600 average homes. Expanding wind power will create even more opportunities for manufacturers and service suppliers in the state.

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.

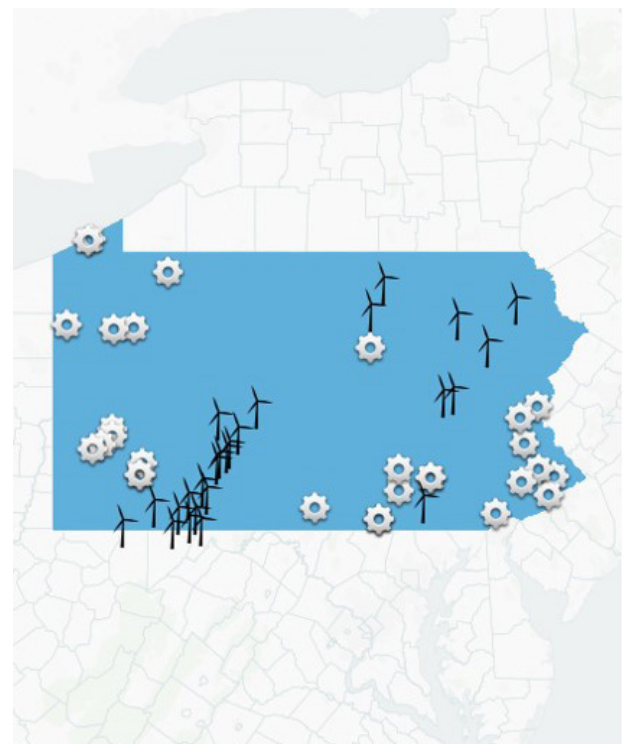
- Direct wind industry jobs in 2018: **1,001 to 2,000**
- Capital investment in wind projects through 2018*: **\$2.9 billion**
- Annual state and local tax payments by wind projects: **\$2.5 million**
- Annual land lease payments*: **\$1 - \$5 million**

*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: **30**



Online Wind Project



Wind-related Manufacturing Facility

Wind Projects as of 4Q 2018

- Installed wind capacity: **1,369 MW**
 - » State rank for installed wind capacity: **18th**
- Number of wind turbines: **726**
 - » State rank for number of wind turbines: **18th**
- Wind projects online: **24** (Projects larger than 10 MW: 22)
- Wind capacity under construction: **90 MW**
- Wind capacity in advanced development: **68 MW**

Wind Generation

In 2018, wind energy provided 1.7% of all in-state electricity production.

- State rank for share of electricity: 31st
- Equivalent number of homes powered by wind in 2018: 347,600

Wind Energy Potential

- Land-based technical wind potential at 80 m hub height: 108,946 MW
(Source: AWS Truepower, NREL)
- Offshore net technical wind potential at 100 m hub height: 3,578 MW (Source: NREL)

Environmental Benefits

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

- 2018 annual state water consumption savings*: 1.8 billion gallons
- 2018 equivalent number of water bottles saved: 13 billion
- 2018 annual state carbon dioxide (CO₂) emissions avoided: 3.4 million metric tons
- 2018 equivalent cars' worth of emissions avoided: 717,000

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

Renewable Portfolio Standard

Pennsylvania passed an Alternative Energy Portfolio Standard (AEPS) in 2004, requiring electricity suppliers to supply 18 percent of their sales from alternative energy sources by 2021. Wind energy has historically been the renewable resource chosen to meet renewable standards requirements, fulfilling 61% of Pennsylvania's requirement in 2014.

