

WIND ENERGY IN OKLAHOMA



Oklahoma is a national leader in the wind energy industry.

Oklahoma ranks second nationwide for installed wind capacity and total wind energy generation, providing enough electricity to power the equivalent of 2.3 million average U.S. homes in 2017. This wind energy directly translates into cost savings for electricity customers, saving SPP customers \$1.2 billion in 2013. Oklahoma's incredible wind resource also provides economic development, paying annual land lease payments to landowners and supporting 8,000 to 9,000 direct and indirect jobs in 2017. A recent study from Oklahoma State University found that wind companies have paid nearly \$134 million in ad valorem taxes to the state since 2004, increasing revenues for local schools and county services.

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.

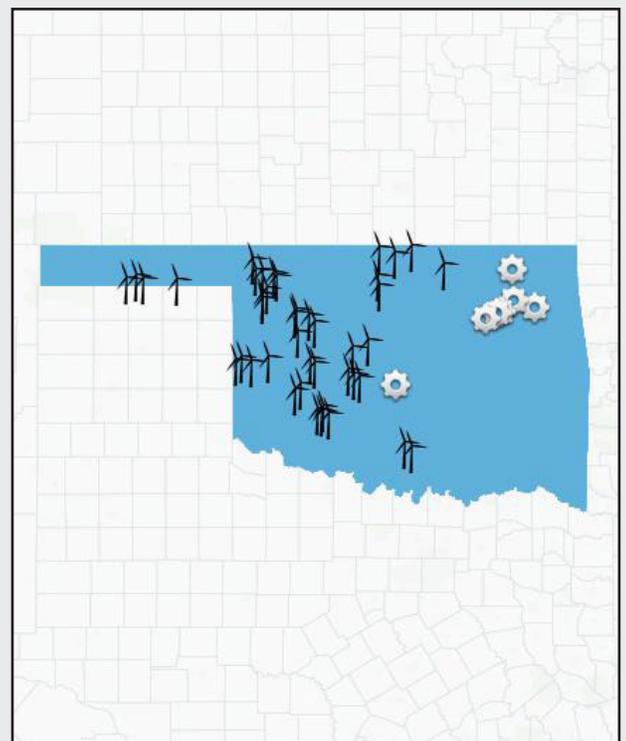
- 2017 direct and indirect jobs supported: **8,001 to 9,000**
- Total capital investment through 2017*: **\$13.7 billion**
- Annual land lease payments*: **\$20 - \$25 million**

*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: **7**



 Online Wind Project  Manufacturing Facility

POWERED BY **WindIQ**

AWEA 

Wind Projects as of 3Q 2018

- Installed wind capacity: **7,694 MW**
 - » State rank for installed wind capacity: **2nd**
- Number of wind turbines: **3,797**
 - » State rank for number of wind turbines: **4th**
- Wind projects online: **46 (Projects above 10 MW: 45)**
- Wind capacity under construction: **1,767 MW**
- Wind capacity in advanced development: **259 MW**

Wind Generation

During 2017, wind energy provided **31.9%** of all in-state electricity production.

- State rank for share of electricity: **3rd**
- Equivalent number of homes powered by wind in 2017: **2,268,000**

Wind Energy Potential

- Land-based technical wind potential at 80 m hub height: **359,434 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*: **4.9 billion gallons**
- 2017 equivalent number of water bottles saved: **37 billion**
- 2017 annual state carbon dioxide (CO₂) emissions avoided: **10.7 million metric tons**
- 2017 equivalent cars' worth of emissions avoided: **2.3 million**

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



Renewable Portfolio Goal

In 2010, Oklahoma set a renewable energy target for 15 percent of total installed generation capacity for operating electric utilities to be renewable sources by 2015. Wind energy has historically been the renewable resource chosen to meet renewable energy targets.