

# WIND ENERGY IN ARIZONA



## Wind energy means economic development for Arizona.

There are at least seven manufacturing facilities in Arizona making components and providing high quality jobs for the wind industry. TPI Composites, a manufacturer of steel composites for the wind industry, is headquartered in Scottsdale. Adding more wind power is a good complement to solar power and can help Arizona cost-effectively and reliably meet its renewable energy goals while generating no emissions and using virtually no water in the energy production process.

## 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: <500
- Capital investment in wind projects through 2018\*: \$590 million
- Annual state and local tax payments by wind projects: \$1 million
- Annual land lease payments\*: \$500k - \$1 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: 7



Online Wind Project      Wind-related Manufacturing Facility

## Wind Projects as of 4Q 2019

- Installed wind capacity: **268 MW**
  - » State rank for installed wind capacity: **28th**
- Number of wind turbines: **144**
  - » State rank for number of wind turbines: **28th**
- Wind projects online: **5** (Projects larger than 10 MW: 4)
- Wind capacity under construction: **0 MW**
- Wind capacity in advanced development: **350 MW**

## Wind Generation

In 2018, wind energy provided **0.5%** of all in-state electricity production.

- State rank for share of electricity: **36th**
- Equivalent number of homes powered by wind in 2018: **56,300**

## Wind Energy Potential

- Land-based technical wind potential at 80 m hub height: **474,967 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.

- 2018 annual state water consumption savings\*: **1.1 billion gallons**
- 2018 equivalent number of water bottles saved: **8.2 billion**
- 2018 annual state carbon dioxide (CO<sub>2</sub>) emissions avoided: **2.2 million metric tons**
- 2018 equivalent cars' worth of emissions avoided: **465,000**

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

## Renewable Portfolio Standard

Arizona first adopted a renewable portfolio standard in 2001 and expanded the standard in 2006. The current Renewable Energy Standard (RES) requires utilities to supply 15% of their electricity sales from renewable resources by 2025.

