

WIND ENERGY IN CALIFORNIA



California led the world in wind energy development through much of the 1980s and 1990s.

Today, California remains a national leader in the wind industry, ranking fourth in the U.S. for wind power installations while boasting at least 13 wind-related manufacturing facilities. California's well-known wind resource areas include Altamont Pass, outside San Francisco in Alameda and Contra Costa County; San Geronio Pass, near Palm Springs in Riverside County; and Tehachapi Pass, near Tehachapi in Kern County. The largest wind project in the United States, the Alta Wind Project, is also located in Tehachapi.

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.

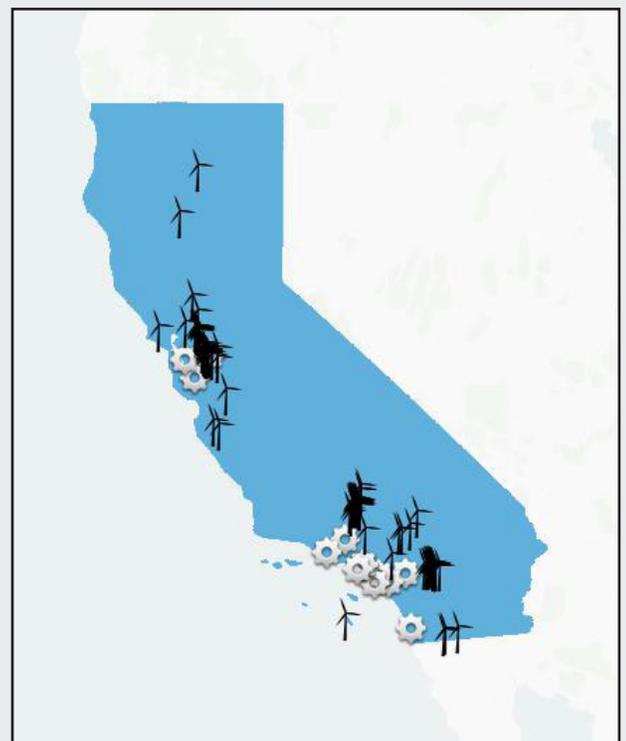
- 2017 direct and indirect jobs supported: **3,001 to 4,000**
- Total capital investment through 2017*: **\$12.6 billion**
- Annual land lease payments*: **\$15 - \$20 million**

*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: **13**



 Online Wind Project  Manufacturing Facility

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Wind Projects as of 3Q 2018

- Installed wind capacity: **5,690 MW**
 - » State rank for installed wind capacity: **4th**
- Number of wind turbines: **6,974**
 - » State rank for number of wind turbines: **2nd**
- Wind projects online: **106 (Projects above 10 MW: 66)**
- Wind capacity under construction: **55 MW**
- Wind capacity in advanced development: **376 MW**

Wind Generation

During 2017, wind energy provided **6.8%** of all in-state electricity production.

- State rank for share of electricity: **17th**
- Equivalent number of homes powered by wind in 2017: **1,298,000**

Wind Energy Potential

- Land-based technical wind potential at 80 m hub height: **303,376 MW**
(Source: AWS Truepower, NREL)
- Offshore net technical wind potential at 100 m hub height: **112,455 MW** (Source: NREL)

Environmental Benefits

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

- 2017 annual state water consumption savings*: **3.2 billion gallons**
- 2017 equivalent number of water bottles saved: **24.1 billion**
- 2017 annual state carbon dioxide (CO₂) emissions avoided: **7.5 million metric tons**
- 2017 equivalent cars' worth of emissions avoided: **1.6 million**

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



Renewable Portfolio Standard

First enacted in 2002, California increased its renewable portfolio standard (RPS) again in 2018, requiring 60% of all utility retail sales to come from renewable resources by 2030. California also established a new requirement for the state to obtain 100% of its electricity from clean energy sources by 2045.