

# Top 20 States with Wind Energy Resource Potential



The United States has tremendous wind energy resources. Although California gave birth to the modern U.S. wind industry, 16 states have greater wind potential.

Installed wind energy generating capacity is now over 20,000 MW. The installed wind power fleet is expected to generate an estimated 48 billion kilowatt-hours (kWh) of wind energy in 2008, just over 1% of U.S. electricity supply, powering the equivalent of over 4.5 million homes.

By contrast, the total amount of electricity that could potentially be generated from wind in the United States has been estimated at 10,777 billion kWh annually—more than twice the electricity generated in the U.S. today.

Germany is the world leader in terms of installed wind power, with over 22,000 MW installed, yet it has only a fraction of the wind energy potential that North Dakota alone has.

Large wind systems require average wind speeds of 6 meters/second (13 mph)

In graph below, “moderate” means wind speeds of 6.4-7 meters per second (m/s) at a 50-meter height, “good” means 7-7.5 m/s, and “excellent” means 7.5 m/s and higher.



**THE TOP TWENTY STATES** for wind energy potential, as measured by annual energy potential in the billions of kWhs, factoring in environmental and land use exclusions for wind class of 3 and higher.

1	North Dakota	1,210	11	Colorado	481
2	Texas	1,190	12	New Mexico	435
3	Kansas	1,070	13	Idaho	73
4	South Dakota	1,030	14	Michigan	65
5	Montana	1,020	15	New York	62
6	Nebraska	868	16	Illinois	61
7	Wyoming	747	17	California	59
8	Oklahoma	725	18	Wisconsin	58
9	Minnesota	657	19	Maine	56
10	Iowa	551	20	Missouri	52

Source: *An Assessment of the Available Windy Land Area and Wind Energy Potential in the Contiguous United States, Pacific Northwest Laboratory, 1991.*

