

Nebraska's Renewable Energy Status

From the [U.S. Energy Information Administration](#)

Renewable resources fuel almost one-fifth of Nebraska's net electricity generation, and the state has substantial undeveloped [renewable resource](#) potential.

[Wind energy](#) potential is excellent across the entire state, and wind powers the largest share of Nebraska's renewable electricity generation. In 2018, wind energy's contribution to the state's total net generation was almost twice as much as it was five years earlier, and wind accounted for three-fourths of the state's generation from renewable resources. Nebraska has nearly 1,000 wind turbines with more than 1,650 megawatts of generating capacity installed at utility-scale (greater than one megawatt) facilities.

[Hydroelectric](#) facilities produce most of the rest of Nebraska's renewable electricity generation. Nebraska obtains less than 5% of its total net electricity generation from hydroelectric power, with annual generation much lower in years with drought.

In 2017, there were 11 hydropower generating plants in Nebraska. There is little potential for the development of additional conventional hydroelectric facilities in the state, but the use of small-scale generators in natural water flows may be feasible.

Nebraska's [solar](#) resources are greatest in the western part of the state, but development is limited. The largest solar photovoltaic (PV) project in Nebraska, a 5.7-megawatt facility, became operational in December 2017. Nebraska has about 16 megawatts of utility-scale solar PV capacity and almost 8 megawatts of distributed (customer-sited, small-scale) capacity.

However, it appears utility level solar power is poised to increase substantially. Omaha Public Power District has announced it will be adding between 400 and 600 Megawatts (MW) of solar power in the near future and there is a company looking to establish a 230 MW solar farm in Lancaster County. There are also a number of



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Nebraska has wind, hydroelectric, solar, geothermal, ethanol and other biofuels available as renewable energy.

smaller projects in the planning process.

Although moderate [geothermal energy](#) potential exists across much of the state, there are only a few small areas in northwestern Nebraska with the high-temperature resources needed for power generation, and Nebraska does not generate electricity from geothermal energy. However, some geothermal heat pumps used for heating and cooling buildings have been installed in the state.

Nebraska is the nation's second-largest producer of [fuel ethanol](#). Nebraska is second only to Iowa in the production of corn-based fuel ethanol. There are 25 active ethanol production facilities in the state. Nebraska ethanol producers use more than 700 million bushels of grain to manufacture more than two billion gallons of ethanol each year. The state's ethanol plants produce almost 24 times as much ethanol as is consumed in Nebraska, and most of the ethanol produced in Nebraska is shipped to other states.

Nebraska uses landfill gas and other waste biomass resources to generate electricity, but biomass-fueled power plants contribute less than one-half of one percent to the state's net electricity generation.