



## DIRECTION

are now located in 70 percent of U.S. congressional districts.

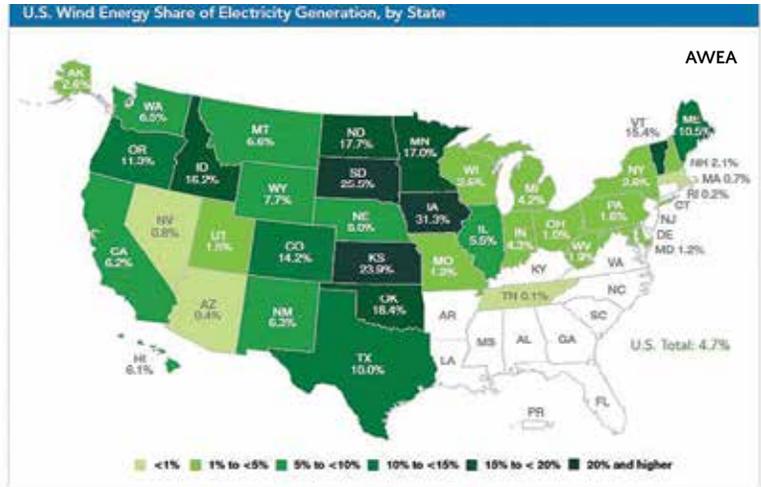
Across the U.S., wind has attracted \$128 billion in new wind project investment over the last 10 years. Texas ranks number one with the most capital investment at more than \$32.7 billion, followed by California over \$11.9 billion, Iowa at \$11.8 billion, Oklahoma at \$9.6 billion, and Illinois at \$7.7 billion.

Also, 70 percent of wind farms are located in low-income counties, supplying them with an economic boost. Wind developers pay a growing total of \$222 million a year in land lease payments to U.S. farmers, ranchers, and other rural landowners.

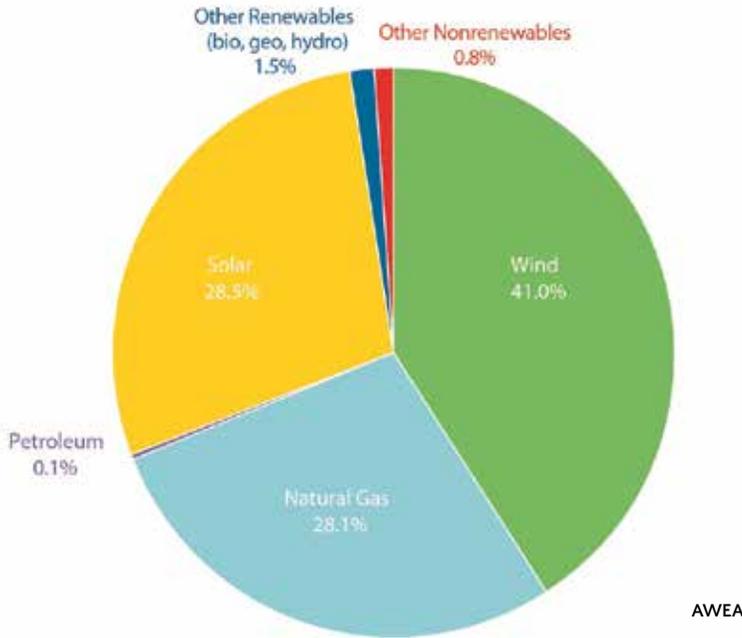
### RAPID GROWTH FUELS HIRING BOOM

The wind rush grew stronger in 2015 as the American industry installed 8,598 MW of electric generating

capacity across 20 states. That's the third most in a year and a 77-percent increase since 2014. Wind's first-place finish in new power plant installations represented 41 percent of all new capacity that came online in 2015, ahead of solar at 28.5 percent and natural gas at 28.1 percent.



U.S. Percentage Share of Power Capacity Additions in 2015



U.S. Wind Industry Annual Market Report, Year Ending 2015

million over 20 years and have already saved the state more than \$20 million in fuel costs. Additional data shows that consumers in the 10 states with the most renewable energy pay less on their electricity bills than the 10 states with the least renewable energy. Growing wind energy to 35 percent of the U.S. electricity supply by 2050 will eventually save American consumers \$14 billion per year with cumulative savings on their electric bills of \$149 billion.

Upgrading the nation's grid and adding new transmission is expected to deliver more clean energy and savings to densely populated U.S. cities that need it most. The Upper Midwest grid operator, for example, found \$50 billion in net benefits from such projects, equaling \$1,000 per customer.

Transmission taps more affordable energy sources at all hours for major cities and big brands like Google and Microsoft. Major brands and other emerging non-utility customers signed 52 percent, or 2,074 MW, of the wind power capacity contracted through power purchase agreements (PPA) in 2015. Low-cost wind energy increasingly appeals to organizations with goals to lower emissions and to protect their bottom line.

**STATES EXPAND WIND ENERGY USE, WHICH OPENS GREATER ACCESS TO CLEAN AIR**

Wind energy supplied more than 31 percent of Iowa's in-state electricity production in 2015, making it the first state in the U.S. to surpass the 30-percent mark. Altogether, 12 states generated at least 10 percent of their electricity with wind energy.

Xcel Energy, the main utility in Colorado, has satisfied over 66 percent of its demand for electricity with wind at times. In the last several weeks, wind provided more than 48 percent of the electricity on the main Texas grid and on the Southwest Power Pool.

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“We have cultivated wind as our most cost-effective renewable energy option because we recognize that this source of energy is not only a benefit to the environment, but also a major economic driver for the state,” said David Eves, president of the Public Service Company of Colorado, an Xcel Energy company. “Our plan is to expand our wind offerings to provide hundreds of new jobs for Coloradans, make a billion dollars in new investments, keep energy costs low for our customers, and improve the environment.”

As a result, Americans can breathe easier due to pollution-free, renewable wind energy displacing harmful emissions from other energy sources.

Each new wind turbine typically avoids over 4,200 metric tons of carbon dioxide (CO<sub>2</sub>) per year, equal to approximately 900 cars’ worth. U.S. wind energy avoided 132 million metric tons in total CO<sub>2</sub> emissions last year, equal to eliminating all electric power sector emissions from Kansas, Nebraska, Oklahoma, and Colorado.

Wind energy also greatly reduces a variety of health-harming air pollutants, including smog-causing sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>), which helps reduce asthma attacks and other respiratory issues. That displaced an estimated 176,000 metric tons of SO<sub>2</sub> and 106,000 metric tons of NO<sub>x</sub> in 2015, representing \$7.3 billion in avoided health costs last year alone. ↴

— Source: AWEA

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