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## Wind Energy Fast Facts

Wind energy generating capacity installed, U.S.: 9,149 MW (end of 2005), in 30 states<sup>1</sup>.

Wind energy generating capacity, worldwide: 59,322 MW (end of 2005, GWEC).

Electricity generated from wind, U.S.: Expected to produce close to 25 billion kWh in 2006<sup>2</sup> (about 0.6% of U.S. electricity generation), enough to serve more than 2.3 million average U.S. households.

Amount of carbon dioxide (CO<sub>2</sub>) emitted if that amount of power were generated from the average U.S. electricity fuel mix: 15 million tons, according to data from the U.S. Energy Information Agency. Over 5 million acres of forest would be needed to absorb that much CO<sub>2</sub>, according to the U.S. Environmental Protection Agency. Carbon dioxide is the leading gas associated with global warming.

<u>Leading states in capacity installed, U.S.:</u>	<u>Largest wind farms, operating, U.S.:</u>
# 1 – California            2,150 MW	# 1 – Stateline, Oregon-Washington    300 MW
# 2 – Texas                 1,995 MW	# 2 – King Mountain, Texas            278 MW
# 3 – Iowa                  836 MW	# 3 – Horse Hollow, Texas             210 MW
# 4 – Minnesota            744 MW	# 4 – New Mexico Wind Energy Center 204 MW
# 5 – Oklahoma            475 MW	# 5 -- Storm Lake, Iowa                193 MW
(as of 12/31/2005)	(as of 12/31/2005)

U.S. wind energy potential: Estimated at 10,777 billion kWh annually—more than twice the electricity generated in the U.S. today (Source: Pacific Northwest Laboratory).

Industry growth rate, U.S.: 29% average over last five years (year-end 2000 – 2005).

Industry growth goal: 100,000 MW installed by 2020, generating 6% of U.S. electricity supply (or about the same amount of electricity that hydropower provides today).

Average American homes served by a single, one-megawatt wind turbine: about 270.

"Double cropping" benefit for rural communities: A single, utility-scale wind turbine provides \$2,000/year or more in income to a landowner leasing his wind rights. Farmers continue to grow crops up to the base of the turbines located on their land.

Operating characteristics of a wind turbine: A wind turbine runs 60% to 80% of the time, and operates at its full rated power output level 10% of the time. On average throughout the year, it generates 30% to 35% of what it would generate if it ran at full power all the time.<sup>3</sup>

<sup>1</sup> 30 states have utility-scale installations of at least 1 MW. Source for data is AWEA unless otherwise indicated.

<sup>2</sup> Using a capacity factor of 30%

<sup>3</sup> (Note: This characteristic is a function of economic design. It would be possible but inefficient and more costly to design wind turbines with a very small generator and large blades resulting in a high "capacity factor" but feeble electricity production).