

# AWEA U.S. WIND INDUSTRY ANNUAL MARKET REPORT YEAR ENDING 2009



AWEA sincerely thanks its member companies and other organizations for their input on industry data. AWEA strives to provide the best information for the wind industry by the wind industry, and welcomes your comments.

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*Right photo: Al Zeitz Wind Technology training classroom at Iowa Lakes Community College.  
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# U.S. WIND INDUSTRY ANNUAL MARKET REPORT FAST FACTS

Over 10,000 MW of wind was installed in 2009, the largest year in U.S. history, keeping the U.S. as the global leader in wind power.

Current U.S. wind power capacity is over 35,000 MW. Wind provided 39% of all new generating capacity in 2009.

14 states are in the “Gigawatt Club” with more than 1,000 MW of capacity installed – 36 states now have utility-scale wind projects.

Top Wind Power Owner: NextEra Energy Resources

Utility With Most Wind Power on System: Xcel Energy

Top U.S. Wind Turbine Supplier: GE Energy

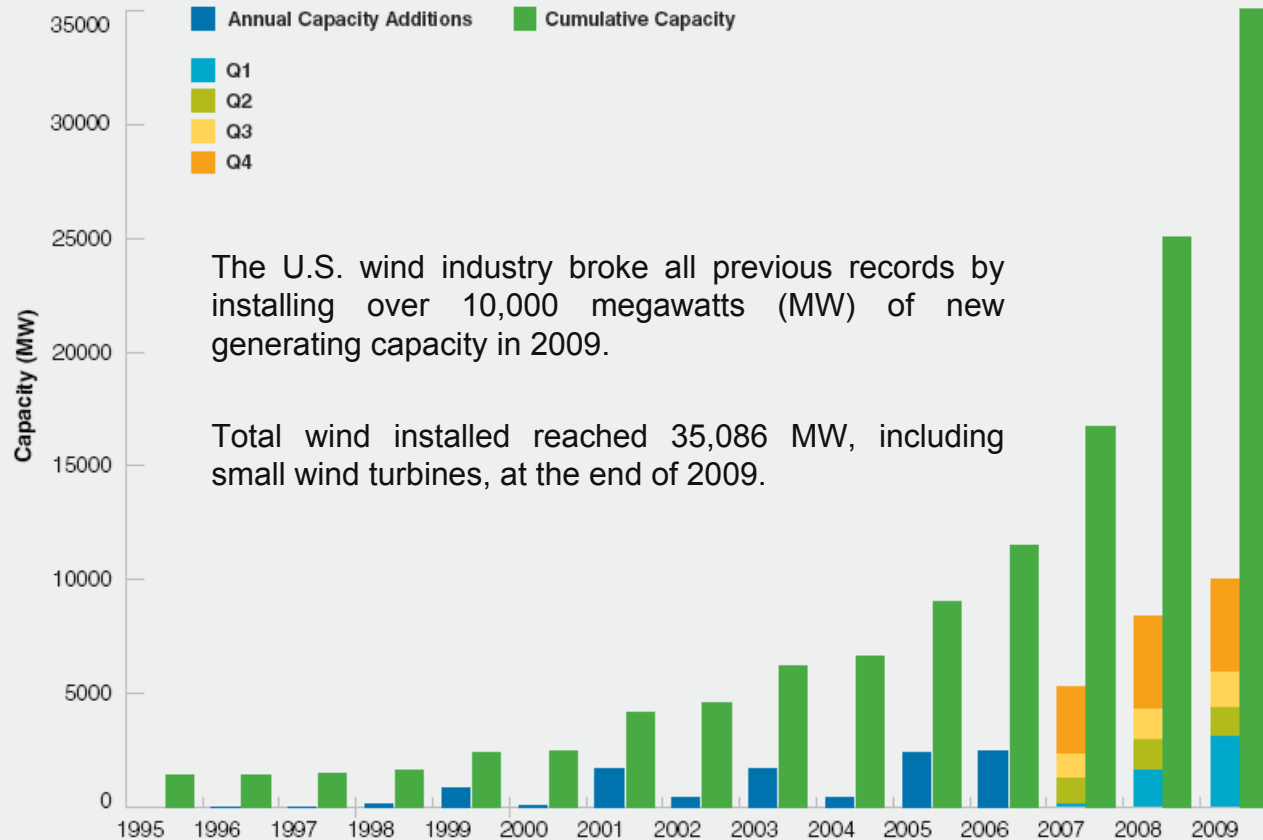
Wind energy provided 1.8% of U.S. power in 2009.

The wind industry supported 85,000 jobs across all 50 states in 2009.

There were 39 new, announced or expanded manufacturing facilities in 2009, and the total number of online facilities is well over 200.

There are now nine different turbine manufacturers with manufacturing facilities in the U.S.

# U.S. ANNUAL AND CUMULATIVE WIND POWER CAPACITY GROWTH



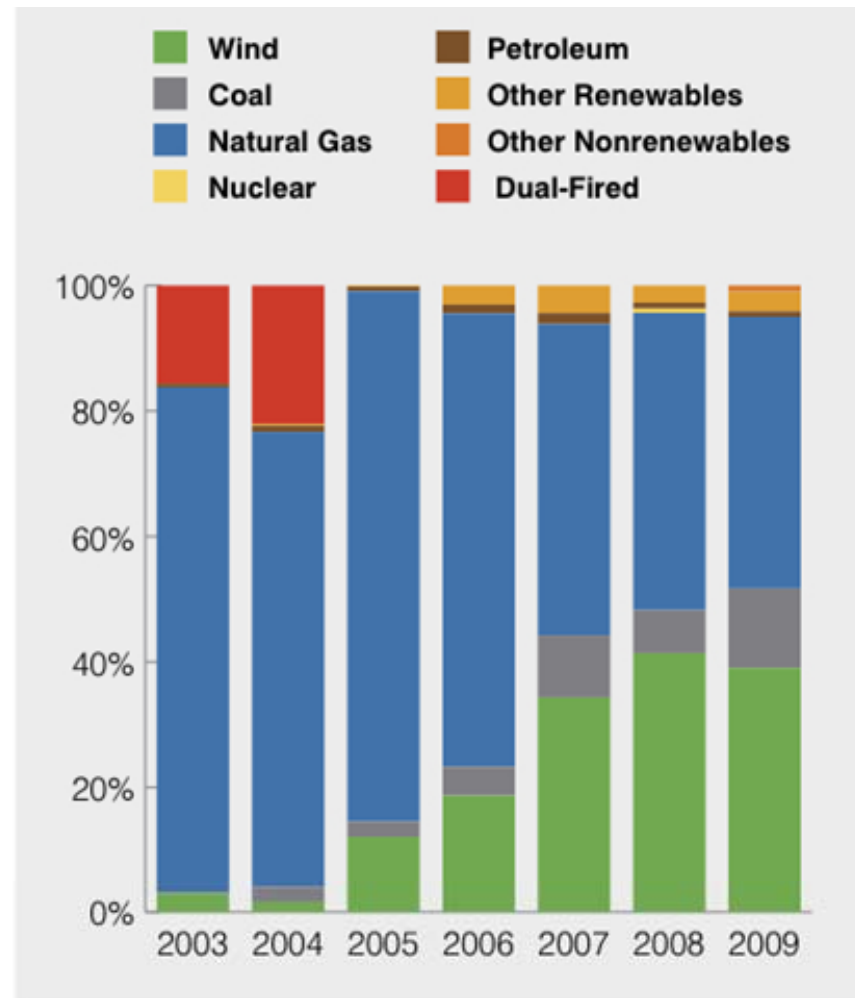
Year	Annual Capacity Additions (MW)	Cumulative Capacity (MW)
Through end 1995		1416
1996	1	1417
1997	17	1434
1998	140	1574
1999	819	2394
2000	67	2460
2001	1691	4151
2002	412	4563
2003	1670	6233
2004	397	6629
2005	2385	9014
2006	2462	11476
2007	5258	16725
2008	8366	25076
2009	10010	35086

Installation figures for years 2006 - 2009 (annual and cumulative) include capacity for installed turbines under 100 kW, whereas earlier years may not. The small wind report tracks sales of wind turbines 100-kW and below. The utility scale wind power projects database tracks turbine installations 100-kW and above. 100-kW turbine sales were subtracted from the small wind report total to avoid double counting. Data has changed slightly from the 2008 Wind Industry Report due to small decommissionings, changes in how the data was reported and other changes provided by companies.

# PERCENTAGE OF NEW CAPACITY ADDITIONS

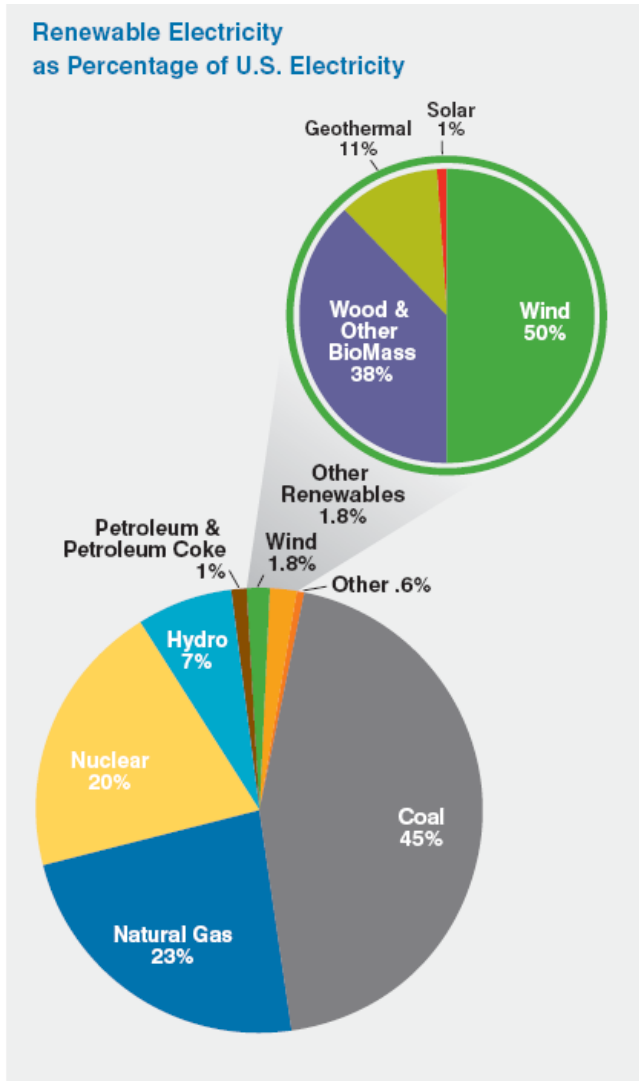
For the past five years, wind power has been one of the largest new sources for electricity generating capacity, second only to new natural gas units. In 2009, wind power provided 39% of all new generating capacity installed.

Since 2005, wind power and other renewable energy technologies, combined with natural gas, have provided over 90% of all new generating capacity in the U.S.



Source: AWEA, SEIA, SNL, Lawrence Berkeley Laboratory

# U.S. GENERATION MIX



Wind generation is approaching the two percent mark of the U.S. power mix, reaching 1.8% of U.S. generation in 2009. This is an increase from 1.3% of generation at the end of 2008.

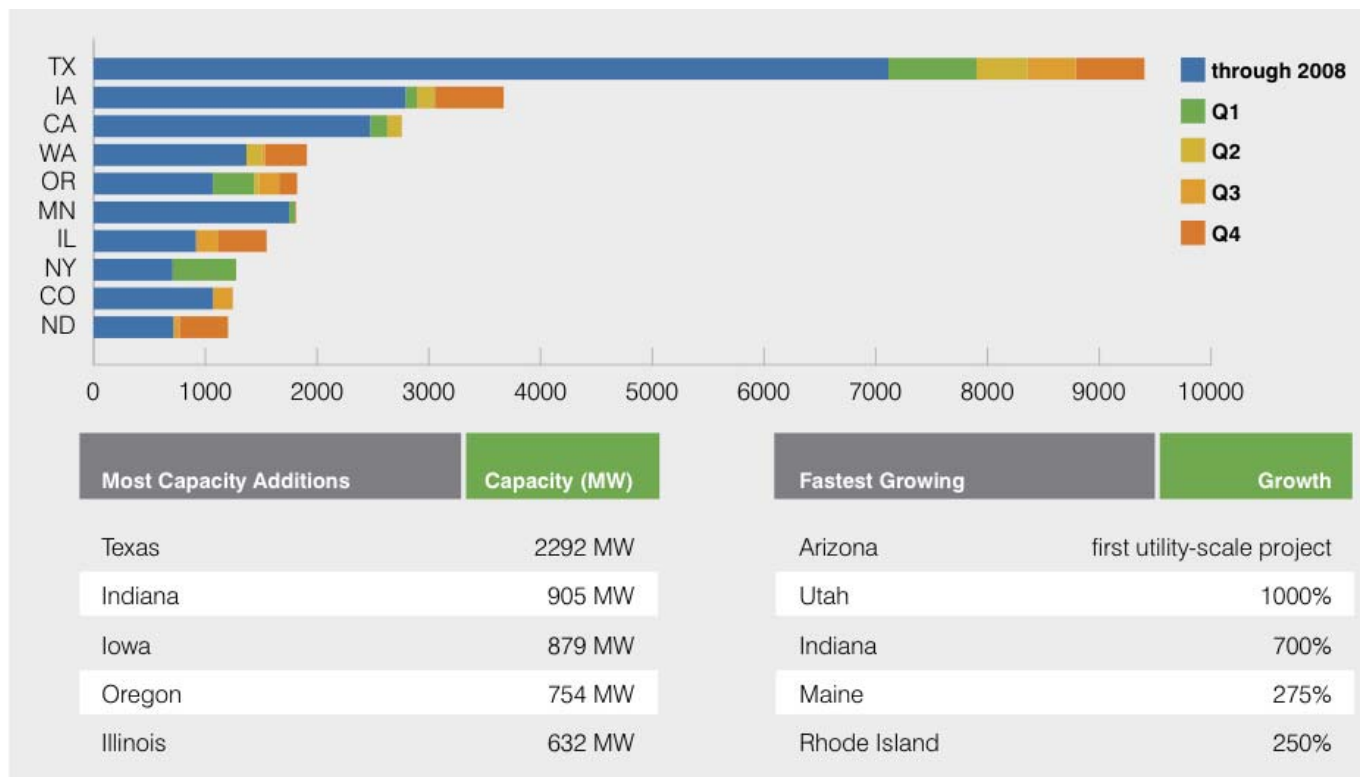
All renewable energy sources provided 10.5% of the U.S. power mix in 2009.

With the significant increase in renewable energy capacity over the past several years, the power mix is reflecting a slow but steady shift toward renewable energy.

# U.S. WIND POWER CAPACITY INSTALLATIONS BY STATE

State-by-state, the U.S. continued to see strong growth in Texas and the Northwest. One up-and-coming area of growth in 2009 was the Midwest states of Indiana and Illinois. Texas again installed the largest amount of new capacity, driving it past the 9,000-MW mark in total installations.

Iowa now has a total of 3,670 MW installed, consolidating its position as #2, behind Texas and ahead of California. With several large wind farms added, Washington and Oregon pulled ahead of Minnesota to round out the top five states.



Source: American Wind Energy Association U.S. Wind Industry Annual Market Report – Year Ending 2009

# AWEA U.S. WIND INDUSTRY ANNUAL MARKET REPORT YEAR ENDING 2009

## OFFSHORE PROJECTS

State	Developer	Project Name	Location	Miles from shore	Planned Capacity
Delaware	NRIG Bluewater Wind, LLC	Mid-Atlantic Wind Park*	Offshore from Rehoboth Beach	13	300 - 450 MW

## TURBINE MANUFACTURERS

Fig. 24 MANUFACTURERS' PERCENTAGE OF 2009 INSTALLATIONS IN U.S.

Figure 24 shows that GE Energy continues to lead the wind turbine manufacturer rankings. Similarly to the wind project owner rankings, 2009 brought more diversity to the U.S. wind turbine market. As shown in Table 13, five utility-scale turbine manufacturers with installed in 2005. By 2009, that number had GE Energy 1.5-MW turbine accounted for 4 new capacity added in the U.S. in 2009. The manufacturers retained the same position. Suzlon owns a majority interest in REpower those two companies' installed capacities together, they would rank in the fourth slot with a number of its largest 2.4-MW turbines. Mitsubishi moved into fourth place in terms of installations. In 2009, the top eight turbine manufacturers accounted for 96% of all new capacity added down slightly from 96% in 2008.



## PROJECT OWNERS AND DEVELOPERS

Fig. 19 U.S. WIND POWER OWNERSHIP DIVERSIFYING OVER TIME

In terms of new capacity additions for 2009 alone (Table 3), Iberdrola Renewables edged NextEra Energy Resources to gain the top spot. Noble Environmental Power rounds out the top five in terms of new additions in 2009, including developers of small projects, there were about 50 project developers that completed 138 projects in the U.S. in 2009 (Fig. 21), up from just over 20 developers installing 22 projects in 2004.



Table 3 10 NEW CAPACITY ADDED

Company
Iberdrola Renewables
NextEra Energy Resources
E.ON Climate & Renewables
Horizon-EDPR
Noble Environmental Power
BP Wind Energy
First Wind
Babcock & Brown
Duke Energy
Inverness



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