



AWEA 2008 Annual Rankings Report

April 2008

Wind energy leaders remain dominant in AWEA's annual rankings report. A broadening of categories reveal new front-runners. All categories reflect strong growth in 2007 when the U.S. wind energy industry installed over 5,000 megawatts (MW). The U.S. total installed wind power capacity is now over 16,800 MW.

The annual AWEA wind power rankings (as of December 31, 2007) are listed below. Pages 2-7 provide quotes from wind power leaders and the top five rankings in each category. Pages 8-14 provide tables and graphs with full rankings and detailed information. One megawatt of wind power produces enough electricity on average to serve 250 to 300 homes.

**Top five states with most wind power installed,
by cumulative capacity and by new capacity added in 2007, in megawatts (MW)**

Top Five States TOTAL INSTALLED by 2007

State	Total installed capacity (MW)
Texas	4,446
California	2,439
Minnesota	1,299
Iowa	1,271
Washington	1,163

Top Five States NEW CAPACITY ADDED in 2007

State	Capacity added in 2007 (MW)
Texas	1,618
Colorado	776
Illinois	592
Oregon	447
Minnesota	405

Texas is firmly established as the leader in wind power development and has racked up a 60% increase from its installed capacity of 2,768 MW at the end of 2006. Minnesota, Iowa, Washington and Colorado all broke the 1,000 MW mark in cumulative capacity in 2007.

"Texas is the nation's leader in wind energy thanks to our long-term commitment to bolstering renewable energy sources and diversifying the state's energy portfolio," said Texas Gov. Rick Perry. "Wind power plays an essential role in providing Texans clean, affordable and reliable energy, and we hope to continually expand our generation capacity far into the future."

States with the largest percentage of wind generation in 2007

State	Wind generation <i>(as a percentage of all electricity generation)</i>
Iowa	5.5%
Minnesota	4.6%
New Mexico	3.9%
Oregon	3.5%
South Dakota	2.6%

Largest wind projects operating in the U.S. (MW)

Wind farm	Size (MW)	Project owner
Horse Hollow, TX	736	FPL Energy
Sweetwater, TX	585	Babcock & Brown, Catamount
Peetz Table, CO	401	FPL Energy
Capricorn Ridge, TX	364	FPL Energy
Buffalo Gap, TX	353	AES

Horse Hollow, completed in 2006, remains the largest single wind farm in operation in the U.S. for the second year. All of the top five wind farms are located in the Southwest, where large projects continue to be built.

"I've made growing the wind industry in Iowa a top priority for my Administration, and our investment is paying off for Iowans with hundreds of green collar jobs and hundreds of millions of dollars invested in our communities," said Iowa Governor Chet Culver.

"Iowa leads the nation in producing its power from wind energy and is positioned to become the renewable energy capital of the U.S. Iowa is also home to five major wind generation manufacturers who have recently decided to locate or expand here because of our quality workforce— Acciona, Siemens, Clipper, Hendricks and TPI Composites. Dozens of existing Iowa companies now supply the industry. Together, we're building the 'Silicon Valley of the Midwest' by developing the next generation of renewable energy and technology – and it starts here in Iowa, with wind."

Largest turbine manufacturers in 2007, by installed capacity (MW) and number of turbines

Turbine Manufacturer	Capacity installed (MW)	Number of turbines
GE Energy	2,340	1,560
Vestas	953	537
Siemens	863	375
Gamesa	574	287
Mitsubishi	356	356

The fast-growing U.S. wind market continues to attract large manufacturing companies. The wind industry installed over 3,200 turbines in 2007, with a total generating capacity of over 5,200 MW. With 1,560 units installed, the GE 1.5-MW turbine is the most widely used.

Largest wind turbines installed in the U.S. (rated capacity, in MW)

Rated capacity (MW)	Turbine manufacturer	Locations installed
3	Vestas	CA, TX
2.5	Clipper, Nordex	IL, IA, MN, NY, WY
2.3	Siemens	MN, ND, OR, TX, WA
2.1	Suzlon	IA, MO, OK
2	Gamesa	CA, IL, IA, MN, PA, TX

These turbines stand 90 meters to 150 meters tall (300—to almost 500 feet). Within each rated capacity, the length of the blades and height of the towers can vary to accommodate specific location and wind speed needs. Larger, taller turbines catch better winds at higher elevations and are more powerful because of the larger area swept by the blades; advances in technology such as sophisticated power electronics and high-tech materials also increase productivity.

"This achievement reflects the tremendous strides wind power is making in becoming a mainstream option for meeting growing electricity demand," said Victor Abate, Vice President-Renewables for GE Energy. "We are confident that wind power - an abundant, reliable and carbon-free resource - will continue to play a key role in the energy future of this country."

Abate also sees the need for the U.S. to adopt "stable renewable policies, such as a long-term production tax credit (PTC) for wind projects. Such standards would sustain the industry's momentum, creating more jobs and economic opportunities while helping the country to further increase its supply of renewable energy and reduce dependence on foreign energy sources."

"In 2007, Vestas had a global market share in the multi-megawatt wind turbine segment (+2.5 MW) of 85%. We are currently investing heavily in facilities to provide the foundation for developing even more reliable and competitive products, and help drive the wind industry forward," said Jens Søby, President of Vestas Americas.

"Vestas Technology R&D is currently establishing the wind industry's largest R&D facility in Denmark, and in 2009 we will expand our research and development activities to the USA with a new R&D center. The U.S. has one of the best wind resources in the world. With the right political framework in place, this country can become a world leader in the fast-growing wind industry."

**Utilities with the most wind power on their system
(power purchased or projects owned with the power going to the utility's customers) (MW)**

Investor Owned Utilities (IOU)	
IOU	MW
Xcel Energy	2,635
MidAmerican Energy	1,201
Southern California Edison	1,026
Pacific Gas & Electric	878
Luminant (formerly TXU)	704
<i>Xcel Energy remains the leader for the third year.</i>	

Public Power Utilities	
Public Utility	MW
CPS Energy (San Antonio)	501
Austin Energy	274
MSR Public Power Agency (California)	200
Seattle City Light	175
Sacramento Municipal Utility District	106

Rural Electric Cooperatives	
Rural Electric Coop	MW
Great River Energy	218
Last Mile Electric Cooperative	205
Basin Electric	137
Lower Colorado River Authority (purchases 116 MW & resells 10 MW to Austin Energy)	106
Minnkota Power Cooperative	101

"Wind power is an integral part of our generating portfolio, and it has become a significant part of our nation's response to environmental challenges like climate change," said Dick Kelly, chairman, president and CEO of Xcel Energy. "With the right public policy, it will be a growing and affordable part of our long-term plans."

As more utilities become involved in the wind market, AWEA introduces the rankings of public power (municipal) utilities & rural electric cooperatives (co-ops).

"CPS Energy has been actively pursuing a diversified energy supply strategy for nearly four decades, and wind energy is a key focus for us right now," said Mike Kotara, Executive Vice President of Energy Development at CPS Energy.

"Between our wind energy and nuclear generation, over 40% of our generated energy is emissions-free. Our policymaking Board of Trustees set a goal of achieving renewable-energy capacity equal to 15% of our customers' peak demand, and we are well on our way toward achieving that target. Wind energy will continue to be a growing part of our supply portfolio for years to come."

"Great River Energy believes in conducting business in a way that benefits our members and supports a sustainable environment," said Renewable Energy Project Leader Mark Rathbun. "One way we do this is to take advantage of Minnesota's vast and rich wind resources. Our progressive legislative body also passed one of the most aggressive renewable energy standards in the country, setting the bar even higher in the future. We are proud of our accomplishments to date, and will continue to work hard to deliver significant renewable resources to our members and customers."

“As we transition into a new age of energy independence, wind energy has proven to be an increasingly valuable source of power. I am proud to represent the 19th Congressional District of Texas, which not only produces the most wind power in the nation, but is also home to the largest wind farm in the world,” stated Rep. Randy Neugebauer.

“Wind power has proven in its early stages to have tremendous potential not only in Texas, but for the entire country. As America looks to be good stewards of the environment while pursuing new sources of renewable energy, wind energy serves as a shining example of innovation that produces results. As the industry continues to grow, I eagerly anticipate its continued growth and contribution to power generation,” Neugebauer concluded.

Congressional districts with most wind power installed (MW)

District	Wind installed	Representative
TX-19	2366	Rep. Randy Neugebauer (R)
TX-11	1430	Rep. Mike Conaway (R)
OR-2	885	Rep. Greg Walden (R)
MN-1	834	Rep. Tim Walz (D)
CA-10	786	Rep. Ellen Tauscher (D)

Wind projects boost local tax bases, helping to pay for schools, roads and hospitals. Wind projects also revitalize the economy of rural communities by providing steady income to farmers and other landowners. Each wind turbine contributes \$3,000 to \$5,000 or more per year in rental income, while farmers continue to grow crops or graze cattle up to the foot of the turbines.

These rankings are for House Congressional districts. The Senators from the states with most wind power installed are, as previously indicated in the State rankings, from Texas, California, Minnesota, Iowa, and Washington.

**Top five “managing owners”
of wind power projects (MW)**

<u>Project owner</u>	<u>Installations (MW)</u>
FPL Energy	5,077
Iberdrola (including PPM Energy)	1,645
Horizon-EdP	1,142
Babcock & Brown	1,120
MidAmerican (including PacifiCorp)	933

FPL Energy continues to lead. New entrants in the “managing owners” category include two large European utilities—Spain’s Iberdrola, which acquired ScottishPower (owner of wind developer PPM Energy), and Energias de Portugal, which purchased Horizon Wind Energy from investment banker Goldman Sachs.

“FPL Energy continues to lead the way in the development and operation of clean and renewable wind power in the U.S., said Mike O’Sullivan, senior vice president of development for FPL Energy.

“Wind power is good for our shareholders, our customers, and our country. Although wind power cannot meet all of our energy needs, we believe it can and should play a greater role than it does today.”

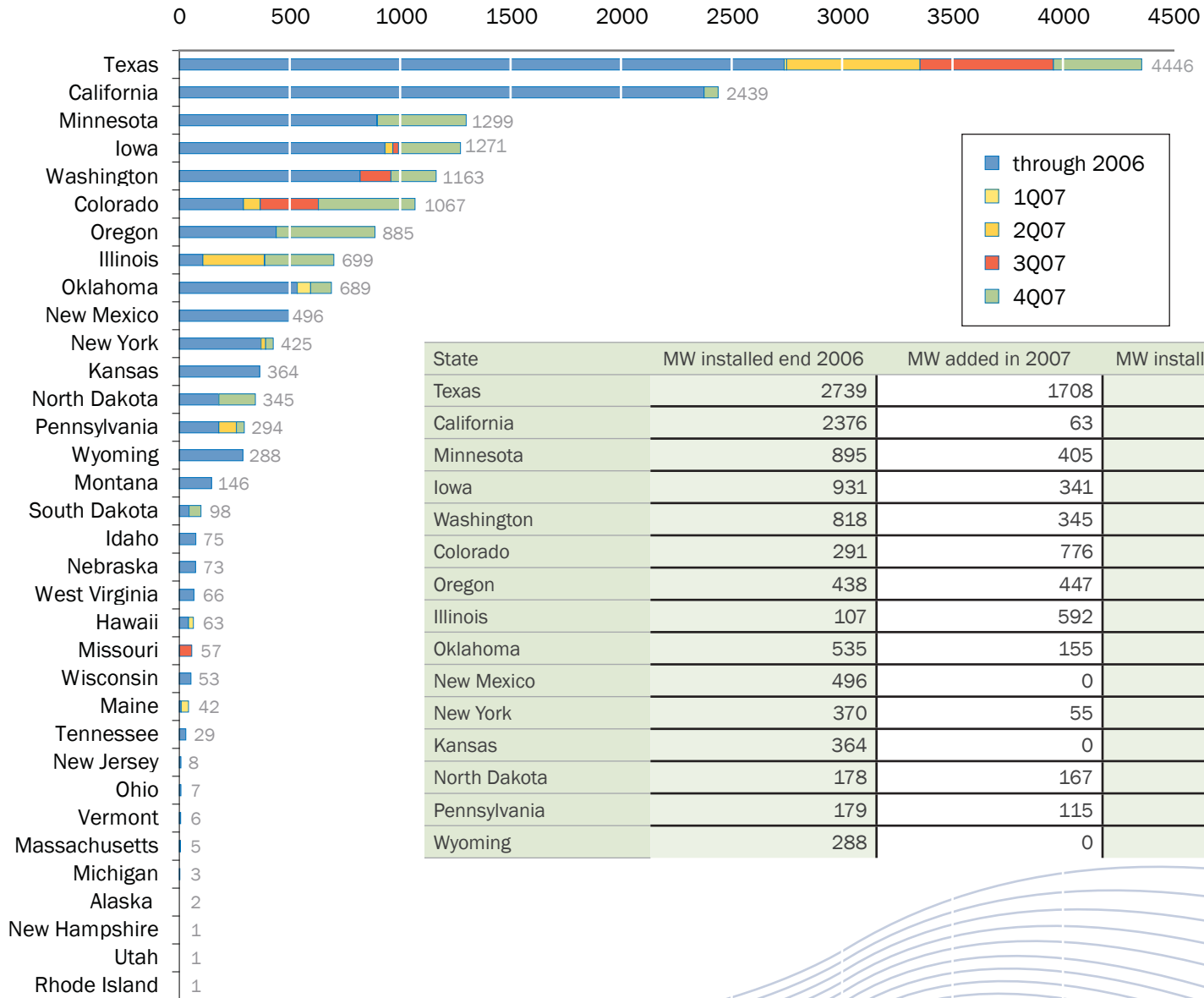
Information for these rankings was reported to AWEA by Association members, and is as of December 2007. For more detailed data on existing wind power projects in the U.S. please go to www.awea.org/projects.

More information on wind energy is available at the AWEA web site: www.awea.org.

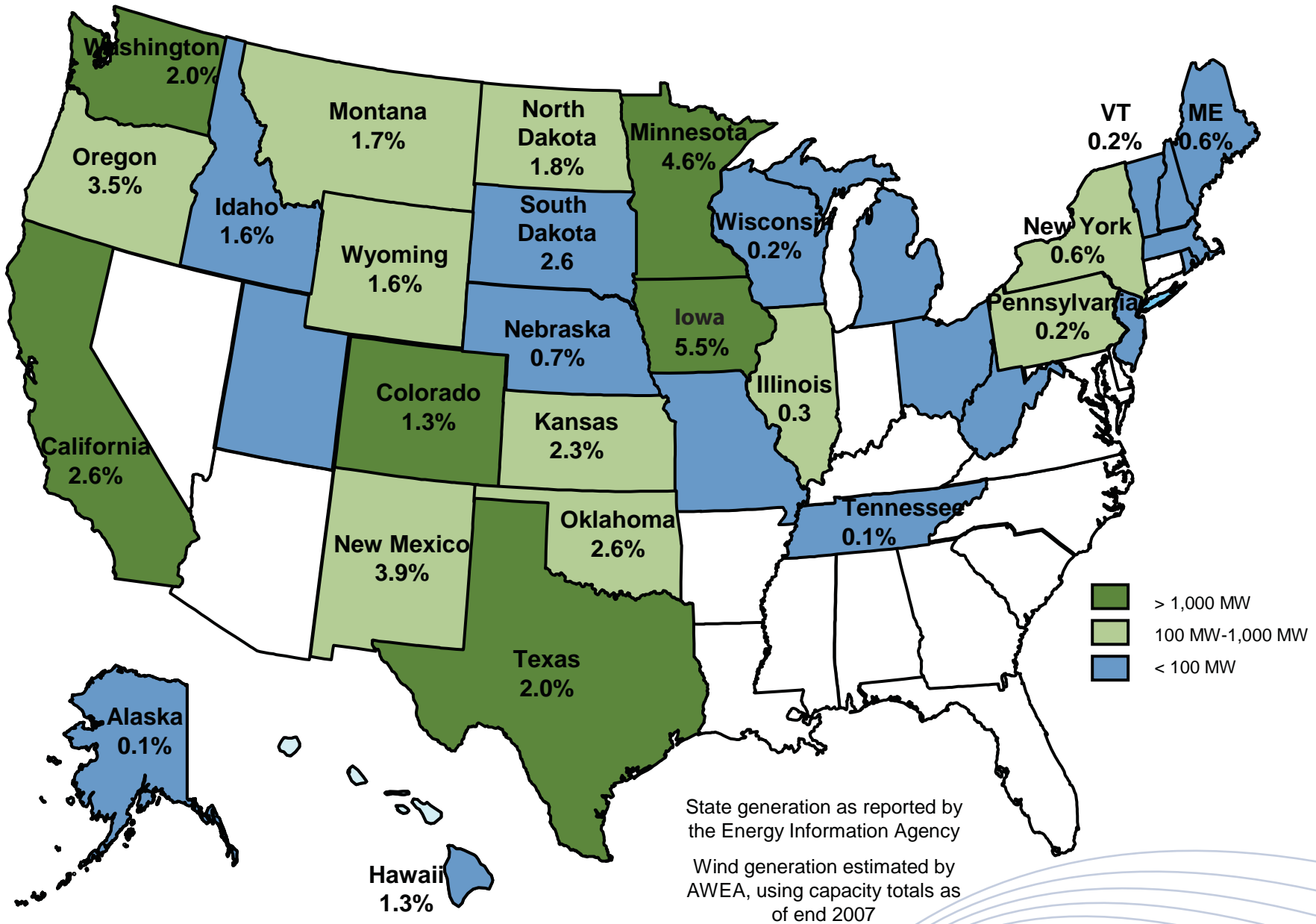
Installed Capacity by State

Chart 1 illustrates the rankings of wind power capacity all states with “utility sized” wind turbines. AWEA considers “utility-sized” to be all wind turbines with generators 100-kilowatt (kW) in size or larger.

Installed Capacity by State (MW)



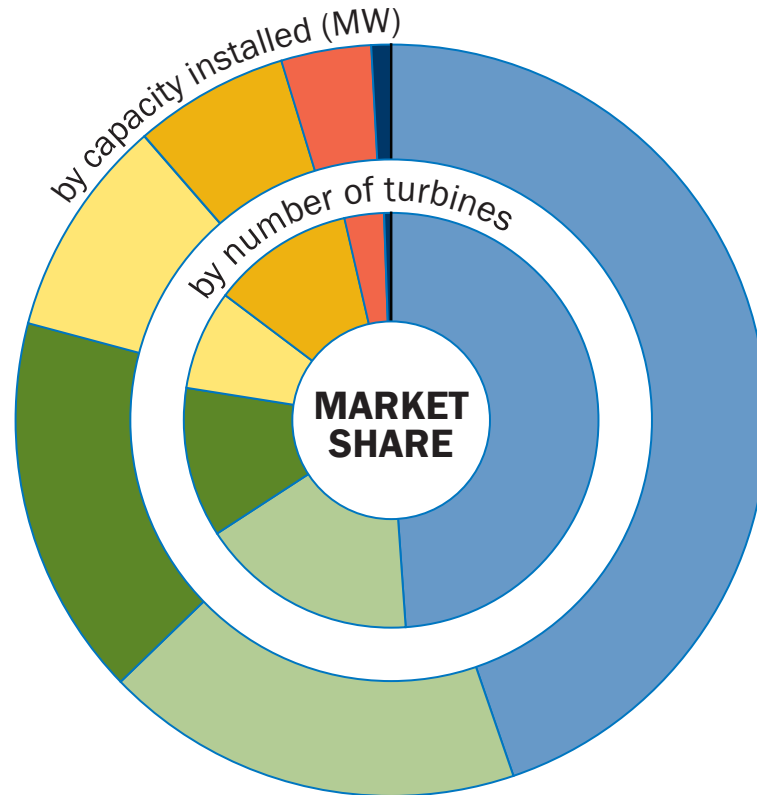
Percentage of State Electricity from Wind



Market Share of Wind Turbine Manufacturers

Chart 2 shows the market share of wind turbines manufacturers in terms of capacity and number of turbines commissioned in 2007. Project commissioning numbers are determined by project owners. There can sometimes be discrepancies between number of turbines commissioned as defined by the turbine vendor and as defined by the project owner.

These totals differ slightly from the numbers reported by AWEA in January in the 2007 Market Report. AWEA anticipates issuing revised and finalized figures in the upcoming 2008 First Quarter Market Report.



Installed in 2007

Company	MW	Turbines
GE Energy	2,340	1,560
Vestas	953	537
Siemens	863	375
Gamesa	574	287
Mitsubishi Power Systems	356	356
Suzlon	197	97
Clipper	48	19
Nordex	2.5	1

Wind Power on Investor-Owned Utilities' Systems

Table 1 lists the amount of wind power either owned or purchased under long-term contract and used for customers by Investor-owned utilities. Some utilities reserve some of the wind power for a subscriber base for their green power programs.

Power Company	PPA for Customers	Owned & Used for Customers	Total for Customers
Xcel Energy	2599	26	2625
MidAmerican Energy	268	933	1201
Southern California Edison	1026		1026
Pacific Gas & Electric	878		878
Luminant Energy (formerly TXU)	704		704
American Electric Power	543		543
Puget Sound Energy	50	378	428
Alliant Energy	378		378
Exelon Energy	342		342
Portland General Electric	100	125	225
Public Service New Mexico	204		204
Reliant Energy	199		199
Oklahoma Gas Electric	50	120	170
Empire District Electric Company	150		150
First Energy	145		145
Northwestern Energy	135		135
San Diego Gas & Electric	132		132
Aquila	112		112
Idaho Power	110		110
Minnesota Power	102		102
Kansas City Power & Light		101	101
Arizona Public Service	90		90
Otter Tail Power	41	41	82
Energy Northwest		64	64
PPL Corp.	50		50
We Energies	25.5	1.3	26.8
Hawaiian Electric	21		21
Madison Gas & Electric		11	11
Wisconsin Public Service		10	10

Wind Power on Public Power Utilities' Systems

Table 2 lists the amount of wind power either owned or purchased under long-term contract and used for customers by publicly-owned municipal utilities. Some utilities reserve some of the wind power for a subscriber base for their green power programs.

Power Company	PPA for Customers	Owned & Used for Customers	Total for Customers
CPS Energy (San Antonio, Tex.)	501.3		501.3
Austin Energy	273.8		273.8
MSR Public Power Agency (Calif.)	199.5		199.5
Seattle City Light	175		175
Sacramento Municipal Utility District		105.8	105.8
Nebraska Public Power District	1.5	59.4	60.9
Oklahoma Municipal Power Authority		51	51
Southern Minnesota Municipal Power Authority	8.5	10	18.5
Municipal Energy Agency of Nebraska	7	10.5	17.5
Atlantic County Utilities Authority	7.5		7.5
Eugene Water & Electric Board		6.5	6.5
Central Minnesota Municipal Power Authority	8.3		8.3
Missouri River Energy Services		5.2	5.2
AMP-Ohio		3.6	3.6
City of Blue Earth	2.5		2.5
Hull Municipal Light Department		2.5	2.5
Waverly Light & Power		2.4	2.4
Iowa Distributed Wind Generation Power		2.3	2.3
Moorhead Public Service		1.5	1.5
El Paso Electric	1.3		1.3
Lincoln Electric System		1.3	1.3
Palmdale Water District		1.0	1.0
Lenox Municipal	0.8		0.8
Omaha Public Power District		0.7	0.7
Stuart Municipal		0.7	0.7
Wall Lake Municipal		0.7	0.7
Traverse City Power & Light		0.6	0.6
City of Howard	0.3		0.3

Wind Power on Rural Cooperative Utilities' Systems

Table 3 lists the amount of wind power either owned or purchased under long-term contract and used for customers by Rural Cooperative utilities. Some utilities reserve some of the wind power for a subscriber base for their green power programs.

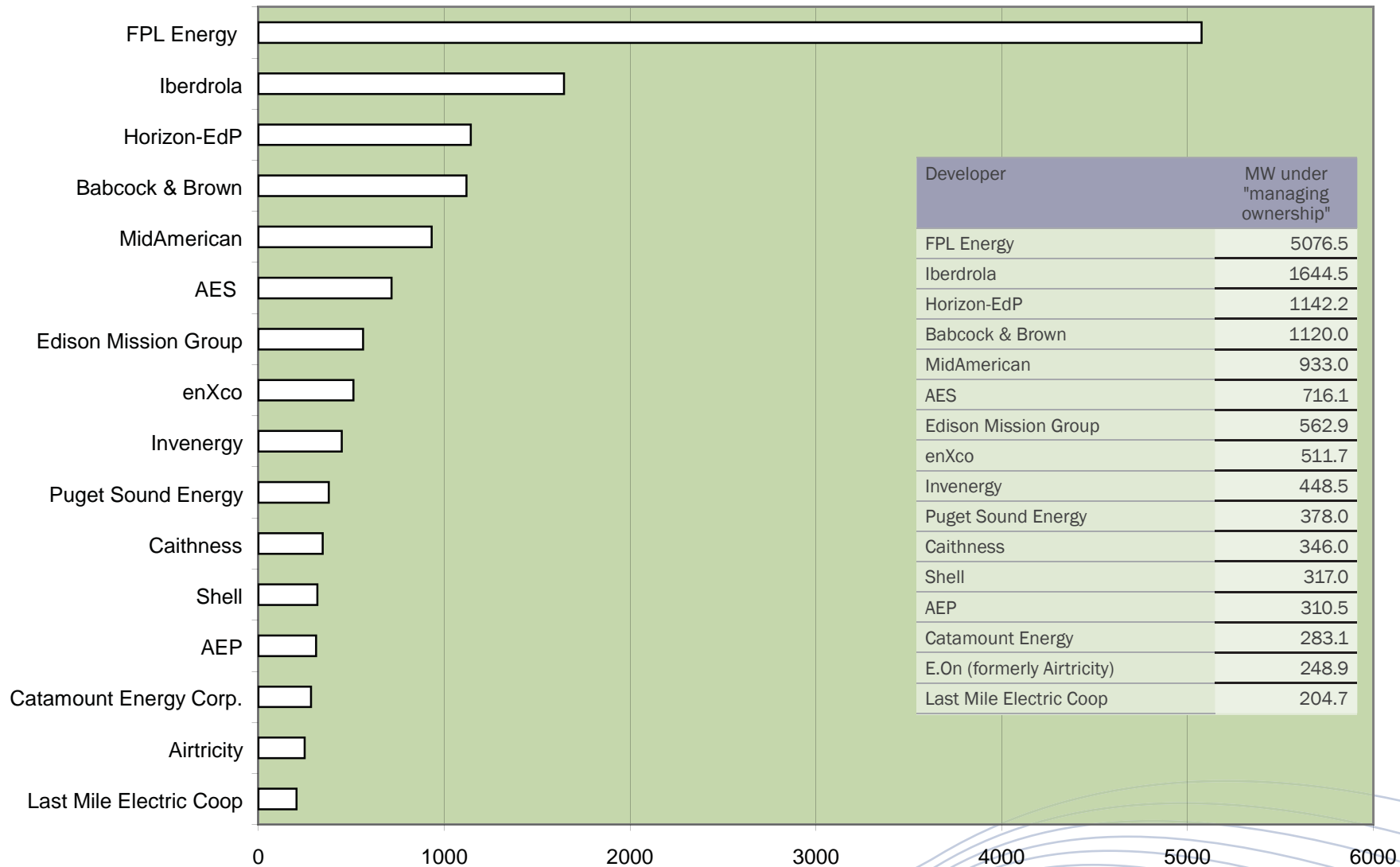
Power Company	PPA for Customers	Owned & Used for Customers	Total for Customers
Great River Energy	218		218
Last Mile Electric Cooperative		204.7	204.7
Basin Electric	131.7	5.2	136.9
Lower Colorado River Authority	106		106
Minnkota Power Cooperative	99	1.8	100.8
Western Farmers' Electric Cooperative	74.3		74.3
Associated Electric Cooperative	56.7		56.7
Corn Belt, Iowa	32		32
Dairyland Power	18		18
Wabash Valley Electric Cooperative	8.4		8.4
Central Iowa Power Cooperative	2		2
Kotzebue Electric Association		2	2
Illinois Rural Electric Cooperative		1.7	1.7
Alaskan Valley Electric Cooperative		1	1
Glacier Electric Cooperative	0.1		0.1

Lower Colorado River Authority has PPA commitments for 116 MW of wind power, but resells 10 MW to Austin Energy.

Largest Owners of Wind Power Projects

Table 4 lists the largest "managing owners" of wind power assets in the U.S. Some of the wind farms in the U.S. have many equity participants. The term "managing owner" is meant to convey the company that has managing interest in the project, not necessarily 100% equity ownership. This list includes companies that own more than 200 MW of wind energy projects in the U.S. It does not include "structured equity" investors.

MW under "managing ownership"



Project Definitions

Definitions (the last two – web link and WEW reference – are not currently being used in the report, and therefore will come out of the definitions for now).

Term	Abbrev.	Description	Information Source
Capacity (in Megawatts)	MW	Total nameplate capacity rating of assembly of turbines	Information as received from project developer at end of each quarter.
Completion Date		Date on which wind project is considered to be operational, is generating revenue and production tax credits. Usually "Commercial Operation Date".	Specific criteria for "Completion" is at the discretion of the project developer.
Merchant or "market"		Wind power plants that are built without a traditional long-term power purchase agreement, instead selling power into a spot-market, sometimes with a hedge contract, or an option to sell the power at a certain price in the future.	Project developer or owner
Owner/Equity Partner		Company or companies that will have a managing interest in project when it is complete, though they may not have 100% ownership. Does not usually include structural equity investors.	Project developer or owner
Power Purchaser		Utility contracted to purchase power under long-term Power Purchase Agreement (PPA) contract or use the power in case of utility ownership	project developer or power purchaser
Project Developer		Company or companies managing most aspects of project development process. Is often a joint effort among several companies.	project developer
Project Name		Name supplied by project developer	project developer
Turbine Manufacturer		Turbine vendor or supplier	project developer or turbine manufacturer
Turbine Rating (in Megawatts)	MW	Nameplate capacity rating of each turbine – typically the maximum potential power output of the turbine generator	project developer