

American Wind Energy Association

U.S. Wind Industry Second Quarter 2016 Market Report

A product of AWEA Data Services

Released July 21, 2016

The U.S. wind industry installed 310 megawatts (MW) during the second quarter of 2016, bringing cumulative year-to-date installations to 830 MW. The U.S. now has an installed capacity of 74,821 MW.

Acting on the five-year extension of the Production Tax Credit (PTC) at the end of 2015, utilities announced plans during the second quarter to develop and own up to 2,600 MW in new wind project capacity. More than 1,800 MW of additional power purchase agreements (PPA) were announced during the second quarter, with utilities signing 81% of the contracted capacity.

There are now over 12,450 MW of wind power capacity under construction, with an additional 5,800 MW in advanced stages of development.

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Electric Utility Requests for Proposals (RFPs)	Full Version Only

Key Takeaways

2016 Wind Project Installations

- The U.S. wind industry installed 310 MW of wind power capacity during the second quarter of 2016, bringing cumulative year-to-date installations to 830 MW.
- The industry installed 169 wind turbines across four states during the second quarter. Texas led the country with 200 MW of wind capacity installed, followed by Kansas (72 MW), Nebraska (36 MW), and a single turbine installation in Iowa.
- There are now 74,821 MW of installed wind capacity in the United States, with more than 49,000 wind turbines operating in 40 states, plus Guam and Puerto Rico.
- GE Renewable Energy, Siemens, and Vestas installed 99% of the 830 MW commissioned during the first half of 2016.

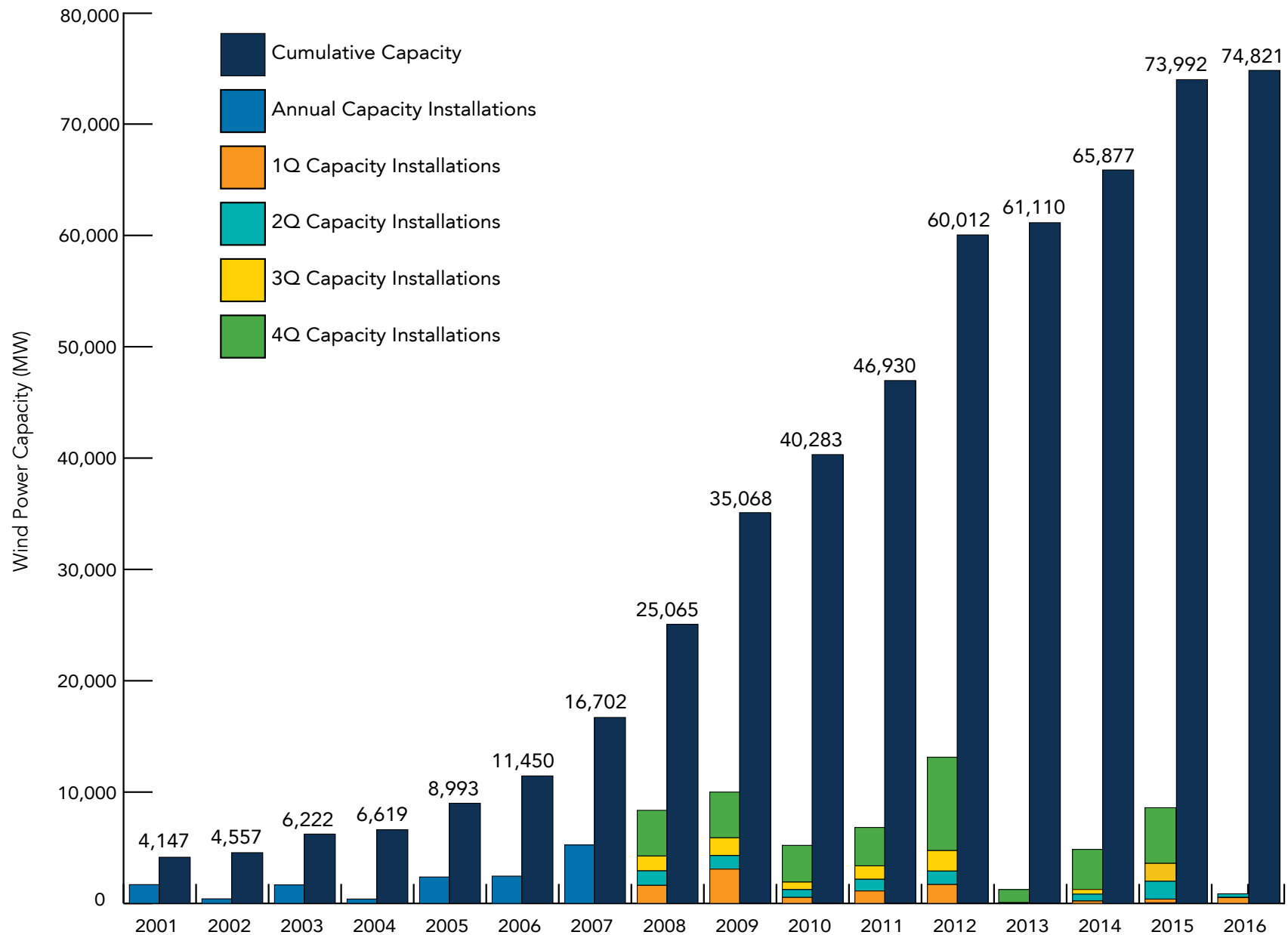
Large Scale Utility Announcements and Construction Activity

- Following the multi-year PTC extension at the end of 2015, utilities announced plans during the second quarter to develop and own up to 2,600 MW in new wind project capacity. Announcements include both the 2,000 MW Wind XI project by MidAmerican Energy in Iowa, as well as the 600 MW Rush Creek project by Xcel Energy in Colorado.
- In total, developers reported more than 12,450 MW of wind capacity currently under construction, a 23% increase over the first quarter of 2016, with more than 3,000 MW in new construction announcements.
- Kansas led the nation with nearly 780 MW in new construction announcements during the second quarter. Texas continues to host the highest level of total construction activity.
- An additional 5,800 MW of wind capacity were reported in advanced stages of development during the second quarter, with more than 3,100 MW of new announcements.

Strong Power Purchaser Activity

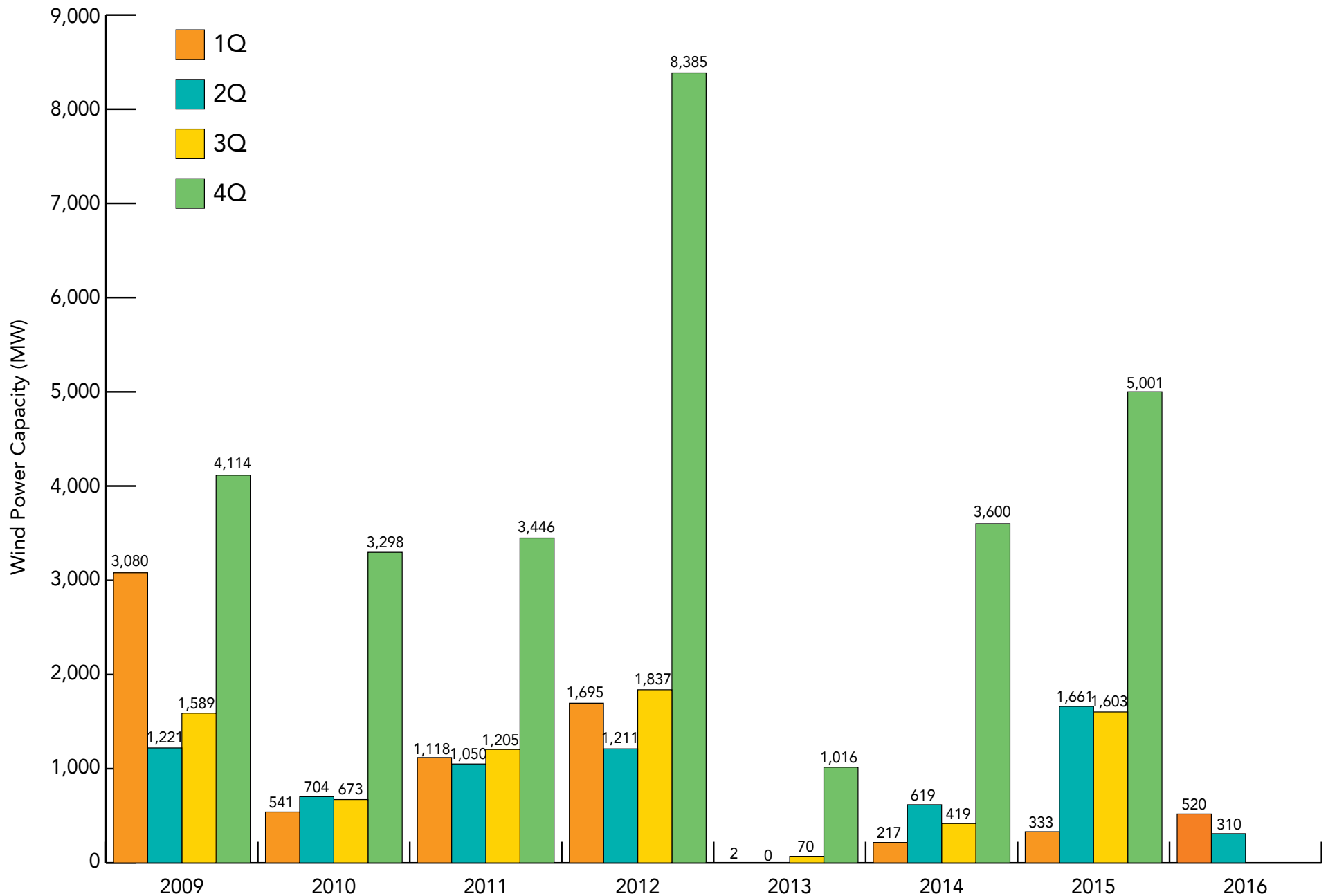
- More than 1,800 MW of PPAs were announced during the second quarter of 2016, the second highest volume of announcements since the beginning of 2014.
- Electric utilities and cooperatives emerged to sign 81% of the contracted capacity during the second quarter. Corporate and other emerging customers of wind, including Google Energy and Dow Chemical, announced the remaining capacity.
- AWEA Quarterly Reports now include a full list of electric utility requests for proposals (RFPs) issued during 2016.

U.S. Annual and Cumulative Wind Power Capacity Growth

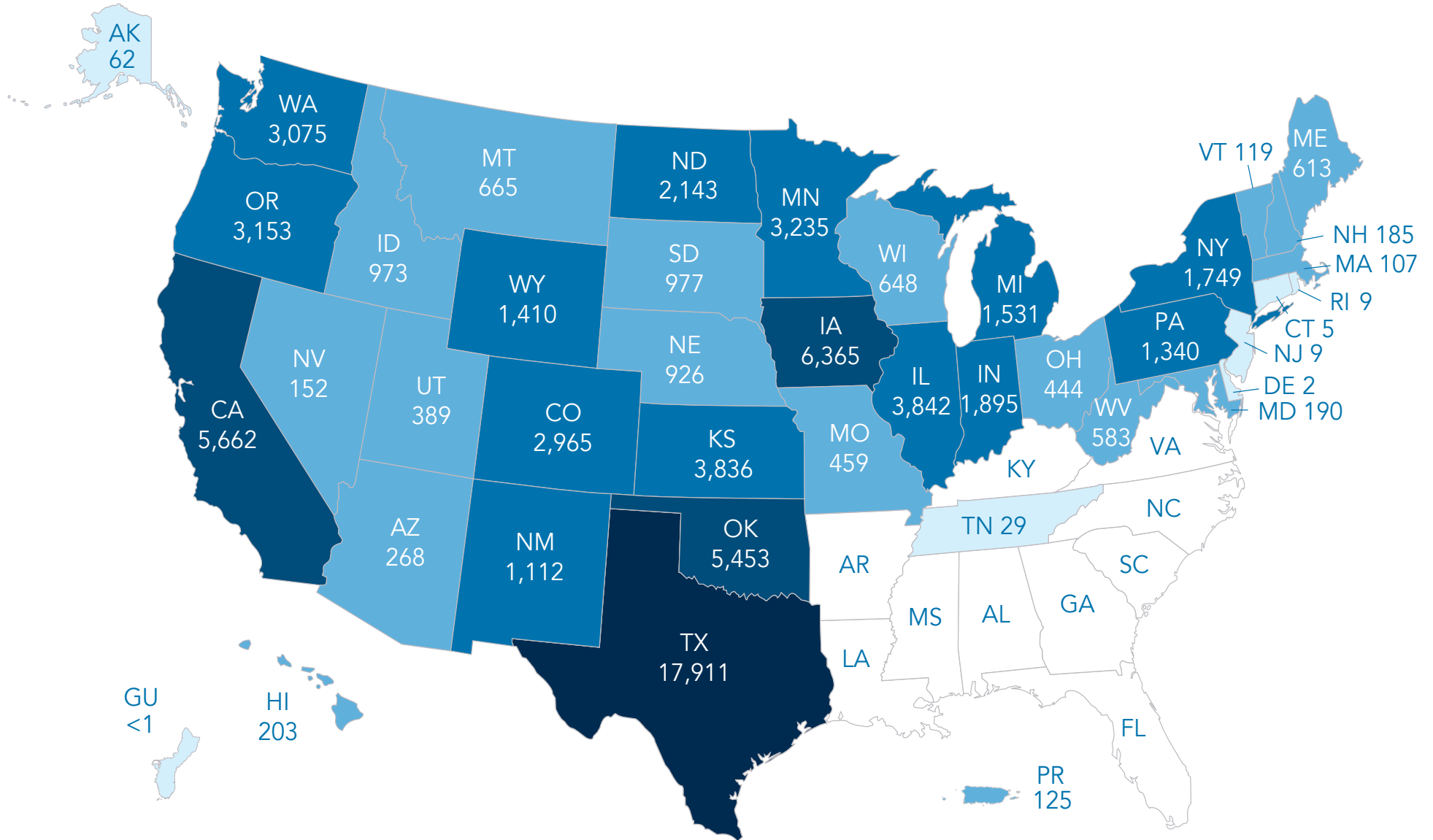


Note: Utility-scale wind capacity includes installations of wind turbines larger than 100-kW for the purpose of the AWEA U.S. Wind Industry Quarterly Market Reports. Annual capacity additions and cumulative capacity may not always add up due to decommissioned, uprated and repowered wind turbines. Wind capacity data for each year is continuously updated as information changes.

U.S. Wind Power Capacity Installations, by Quarter

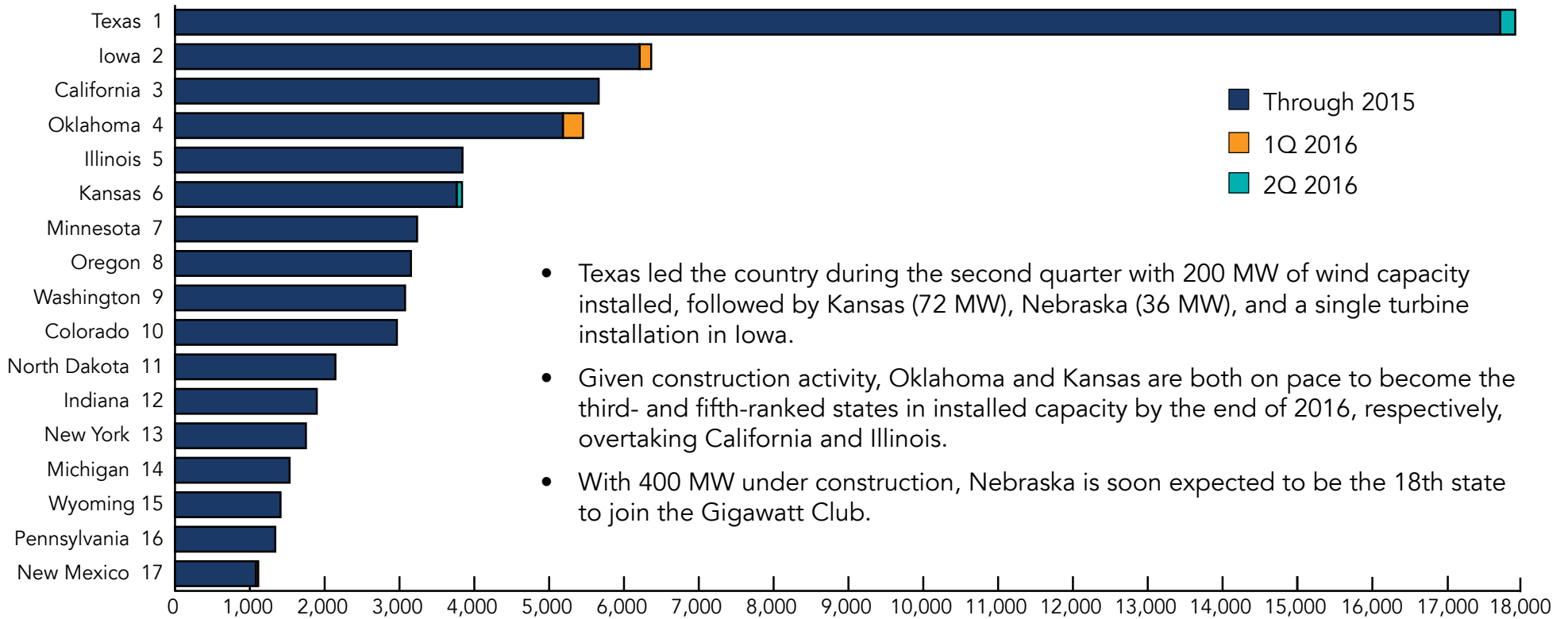


U.S. Wind Power Capacity, by State



0 to 100 MW
 >100 MW to 1,000 MW
 >1,000 MW to 5,000 MW
 >5,000 MW to 10,000 MW
 >10,000 MW

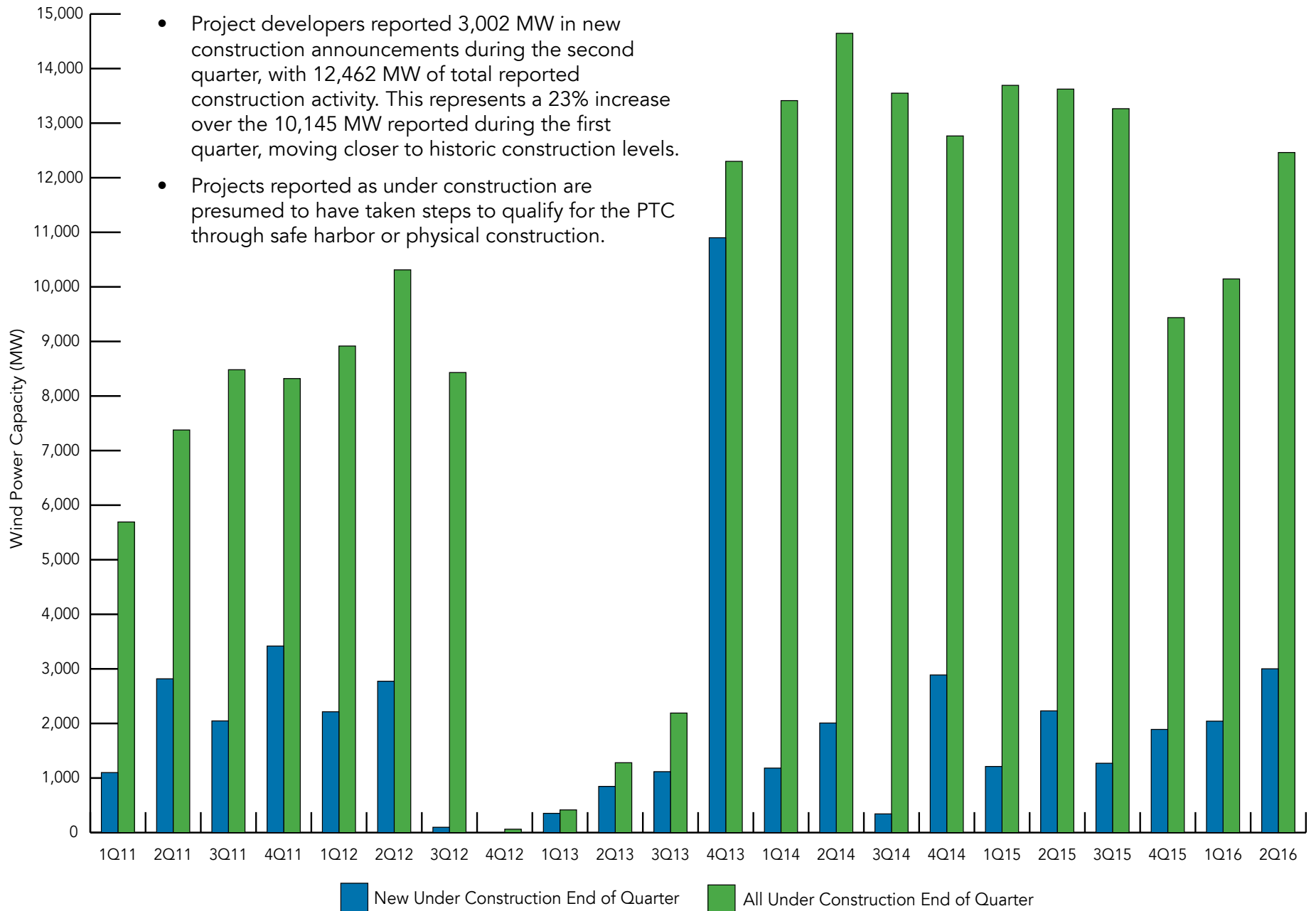
U.S. Wind Power Capacity, Top States



Top Five States with Wind Power Capacity Additions (MW)

State	1Q 2016	2Q 2016	2016 Total
Oklahoma	270	0	270
Texas	0	200	200
Iowa	154	2	156
Kansas	0	72	72
Utah	62	0	62

Wind Power Capacity Under Construction

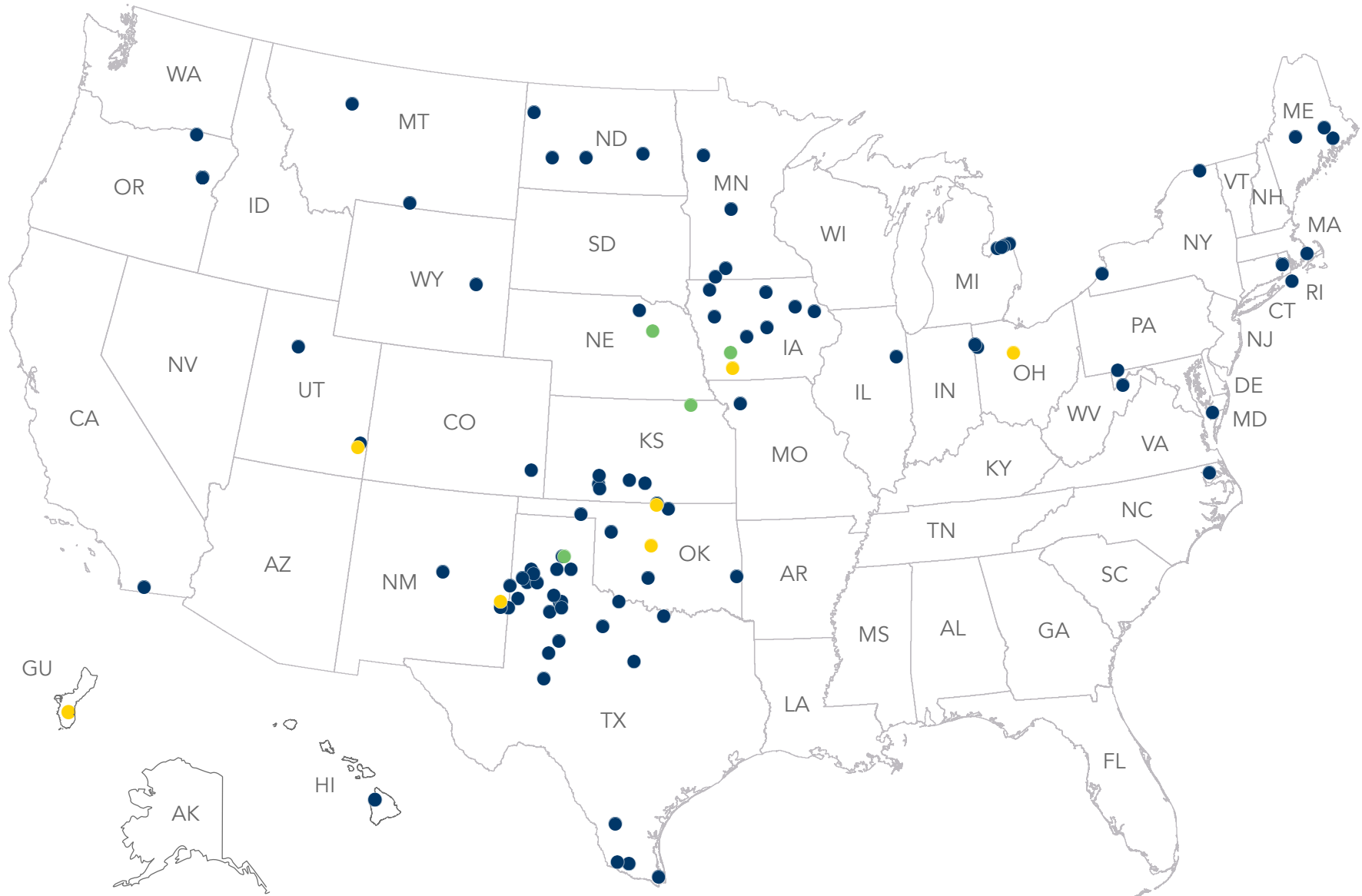


Utility-Scale Wind Projects Completed during 2016

State	Project Name	Project Capacity (MW)	Turbine OEM	Turbine Model	Project Developer	Project Owner	Power Purchaser
First Quarter 2016							
GU	Guam Power Authority Wind Turbine	0.28	Vergnet	GEV MP-C	Guam Power Authority	Guam Power Authority	Guam Power Authority
IA	Adams	154.30	Siemens	SWT-2.3-108	MidAmerican Energy	MidAmerican Energy	MidAmerican Energy
NM	Milo	31.65 (of 49.50)	Vestas	V100-2.0	EDF Renewable Energy; Infinity Wind Power	EDF Renewable Energy; BlackRock	Merchant (SPP)
OH	Harpster Wind	1.50	Goldwind	GW87/1500	One Energy LLC	One Energy LLC	AEP Ohio
OK	Grant Wind	151.80	Siemens	SWT-2.3-108	Apex Clean Energy	Southern Power	ETEC (50.6 MW); NTEC (50.6 MW); Western Farmers Electric Cooperative (50.6 MW)
OK	Kingfisher Wind	118.00 (of 298.00)	Vestas	V100-2.0	Apex Clean Energy	First Reserve	Merchant Hedge Contract
UT	Latigo	62.10	GE Renewable Energy	2.3-116	Sustainable Power Group	Sustainable Power Group	PacifiCorp
Second Quarter 2016							
TX	Colbeck's Corner	200.48	GE Renewable Energy	1.7-100	E.ON Climate & Renewables	E.ON Climate & Renewables	Undisclosed
IA	Green Energy Machine	1.79	GE Renewable Energy	1.7-100	Greenfield Wind Power LLC	Community	Central Iowa Power Cooperative
KS	Marshall Wind Energy	72.00	Vestas	V110-2.0	BHE Renewables; RPM Access Wind Development	BHE Renewables	City of Independence (20 MW); KMEA (7 MW); Kansas Power Pool (25 MW); MJMEUC (20 MW)
NE	Prairie Breeze III	36.00	GE Renewable Energy	1.7-100	Invenergy	Invenergy	City of Grand Island

Map of Projects Online & Under Construction during 2016

● Projects Online 1Q 2016 ● Projects Online 2Q 2016 ● Projects Under Construction as of 2Q 2016



For additional AWEA market analysis, please visit www.awea.org/marketreports where you can download previous versions of the Quarterly Market Reports and the latest Annual Market Report.

The AWEA U.S. Wind Industry Second Quarter 2016 Market Report can be accessed at www.awea.org/2Q2016.

Access the AWEA Market Database Pro at www.awea.org/database for a comprehensive database of all online and under construction wind projects, turbines, and active wind-related manufacturing facilities.



For a spreadsheet with underlying data or with any corrections, please contact Hannah Hunt at hhunt@awea.org.