American Wind Energy Association

U.S. Wind Industry First Quarter 2016 Market Report

A product of AWEA Data Services

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The American wind energy industry installed 520 megawatts (MW) during the first quarter of 2016, the strongest first quarter for installations since 2012. The U.S. now has an installed wind capacity of 74,512 MW.

Following the five-year extension of the Production Tax Credit (PTC) at the end of 2015, there are now over 10,100 MW of wind power capacity currently under construction, with an additional 5,100 MW in advanced stages of development.

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Key Takeaways

2016 Wind Project Installations

- During the first quarter of 2016, the U.S. wind industry installed 520 MW of wind power capacity, the strongest first quarter for installations since 2012.
- The industry installed more than 230 wind turbines across six states at seven projects. Oklahoma led the country with 270 MW of wind capacity installed, followed by Iowa (154 MW), Utah (62 MW), and New Mexico (32 MW).
- Guam installed the territory's first utility scale wind turbine during the first quarter.
- There are now 74,512 MW of installed wind capacity in the United States, with more than 48,800 wind turbines operating in 40 states plus Guam and Puerto Rico.

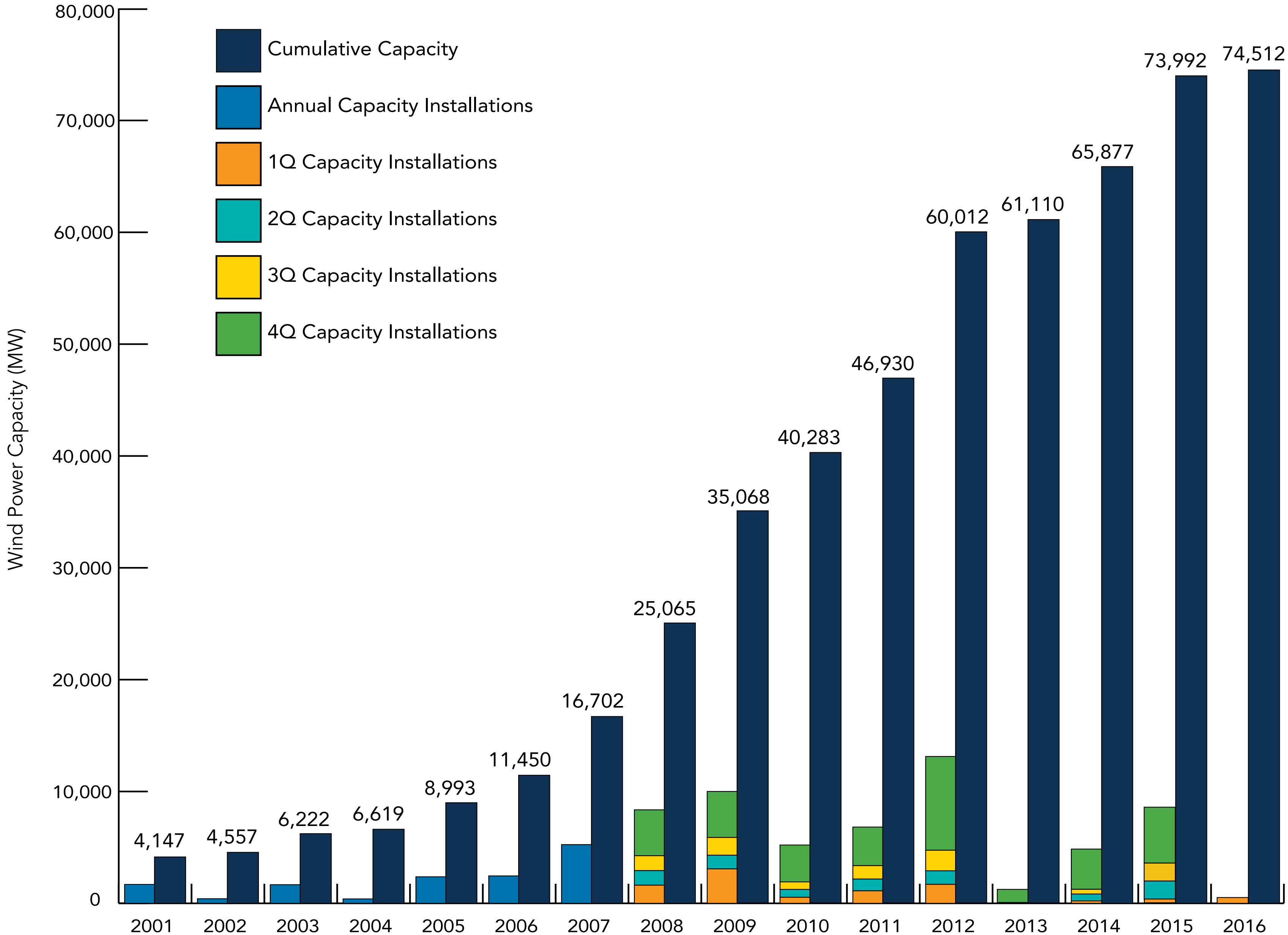
Construction Activity and Near Term Wind Development

- A total of more than 15,200 MW of wind capacity were reported as under construction or in advanced stages of development during the first quarter, with over 3,500 MW of total new announcements.
- Project developers reported more than 10,100 MW of construction activity across 81 projects in 25 states, including over 2,000 MW of new construction announcements.
- Texas continues to host the majority of construction activity, with nearly 5,500 MW reported.
- Developers also reported approximately 5,100 MW of projects in advanced stages of development, with over 1,500 MW of new announcements.

Power Purchaser Activity and Market Updates

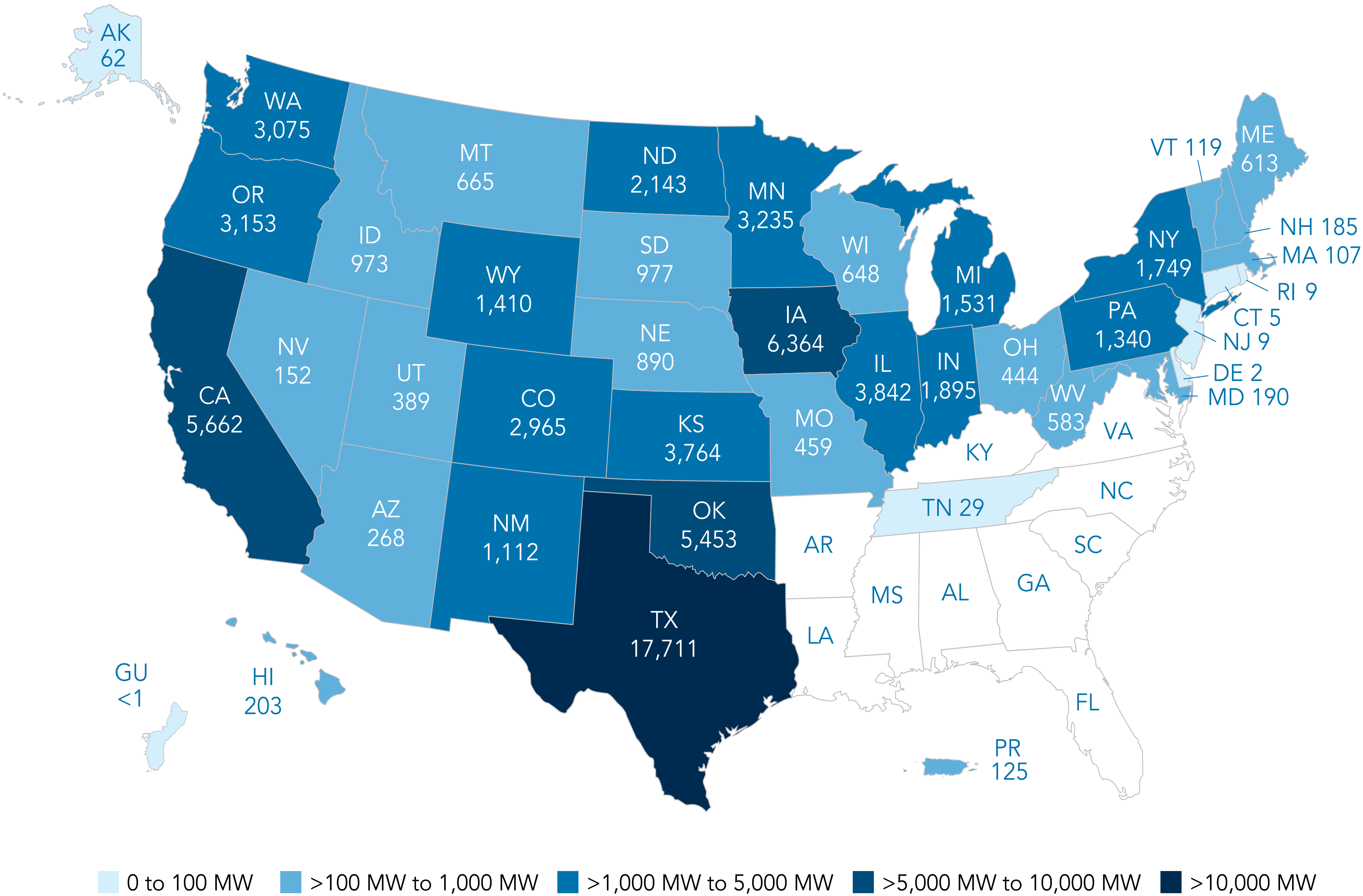
- More than 660 MW of PPAs were signed during the first quarter of 2016, contributing to the more than 4,500 MW of PPAs signed since the beginning of 2015.
- Approximately 37% of the MW contracted through PPAs during the first quarter were through corporate and other emerging customers of wind power, including the Department of Defense (DOD) Defense Logistics Agency, 3M, and Salesforce.
- Companies completed a total of 204 MW in project acquisitions during the first quarter of 2016, including acquisitions by GE Energy Financial Services, Macquarie Group, and Hannon Armstrong.
- GE Renewable Energy, Siemens, and Vestas captured over 99% of the market share of wind turbines installed during the first quarter.

U.S. Annual and Cumulative Wind Power Capacity Growth

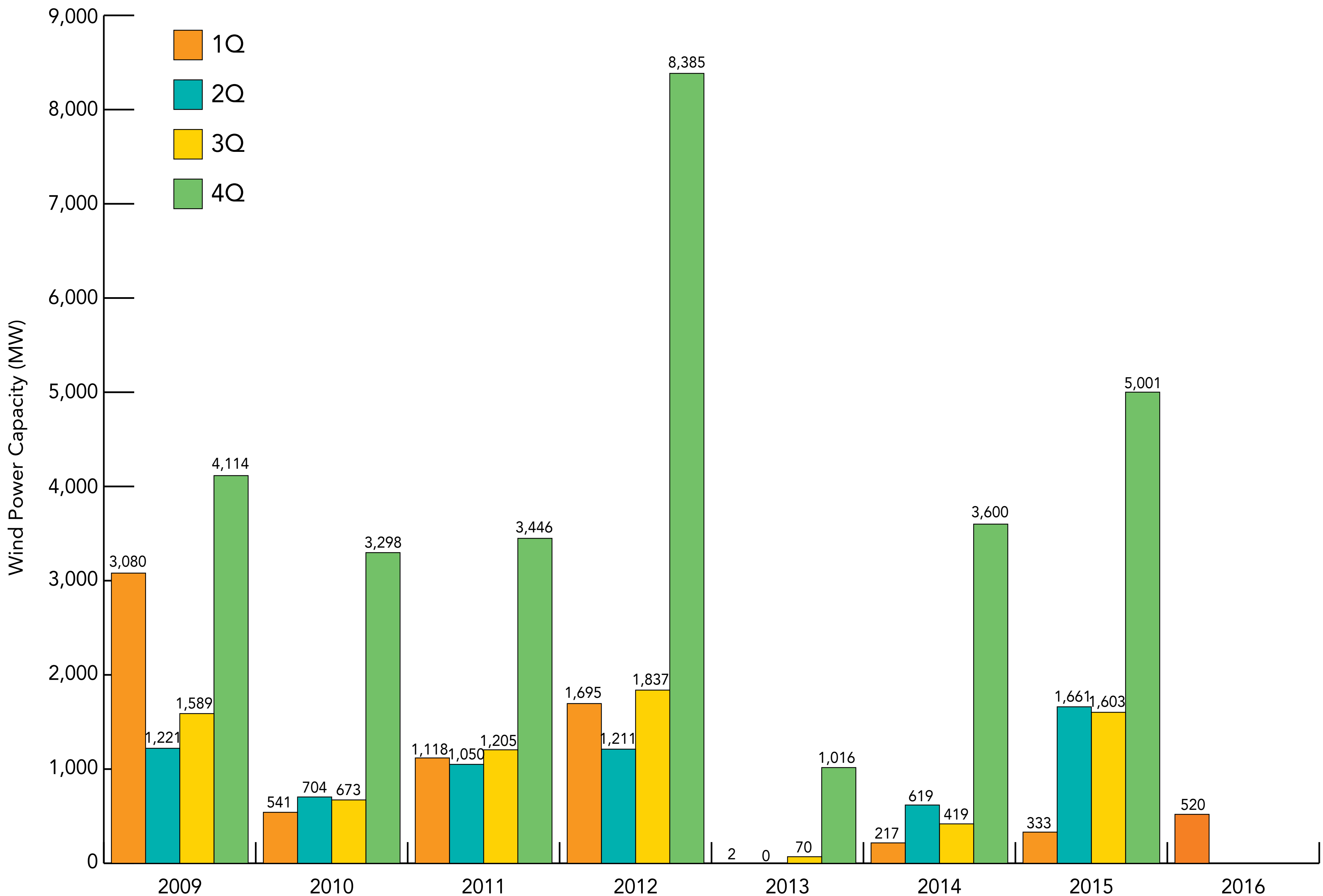


Note: Utility-scale wind capacity includes installations of wind turbines larger than 100-kW for the purpose of the AWEA U.S. Wind Industry Quarterly Market Reports. Annual capacity additions and cumulative capacity may not always add up due to decommissioned, uprated and repowered wind turbines. Wind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

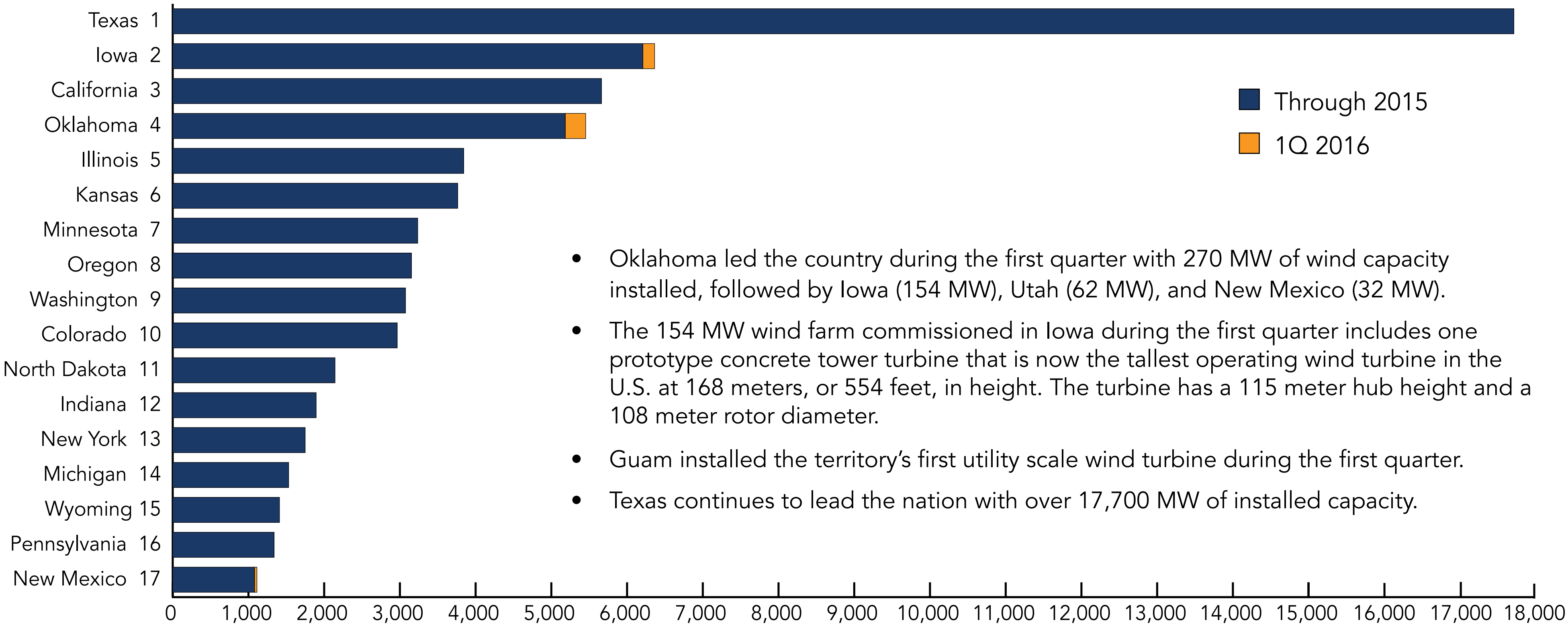
U.S. Wind Power Capacity, by State



U.S. Wind Power Capacity Installations, by Quarter



U.S. Wind Power Capacity, Top States



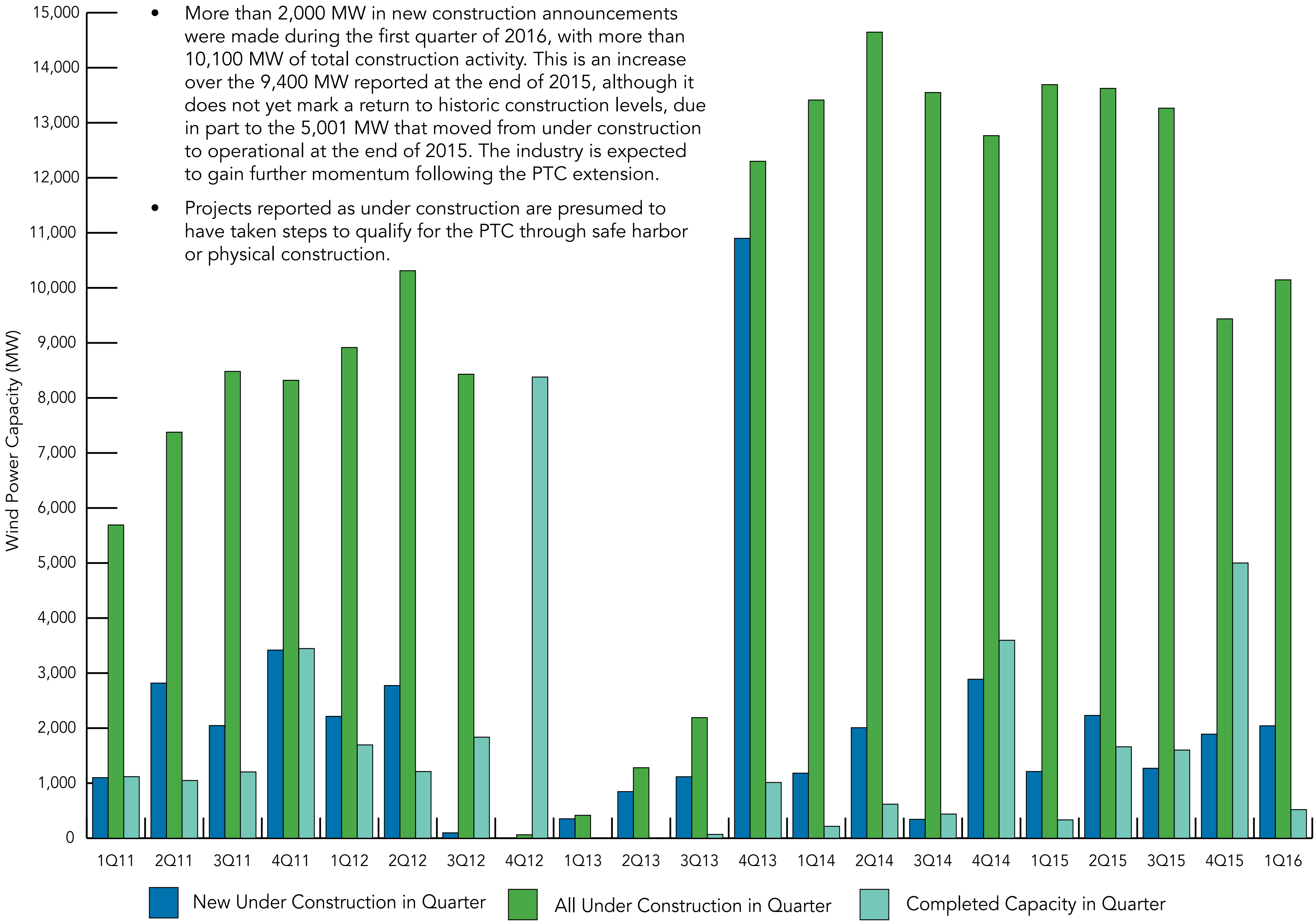
- Oklahoma led the country during the first quarter with 270 MW of wind capacity installed, followed by Iowa (154 MW), Utah (62 MW), and New Mexico (32 MW).
- The 154 MW wind farm commissioned in Iowa during the first quarter includes one prototype concrete tower turbine that is now the tallest operating wind turbine in the U.S. at 168 meters, or 554 feet, in height. The turbine has a 115 meter hub height and a 108 meter rotor diameter.
- Guam installed the territory's first utility scale wind turbine during the first quarter.
- Texas continues to lead the nation with over 17,700 MW of installed capacity.

States with Wind Power Capacity Additions (MW)

State	1Q 2016
Oklahoma	269.8
Iowa	154.3
Utah	62.1
New Mexico	31.7
Ohio	1.5
Guam	0.3

Wind Power Capacity Under Construction

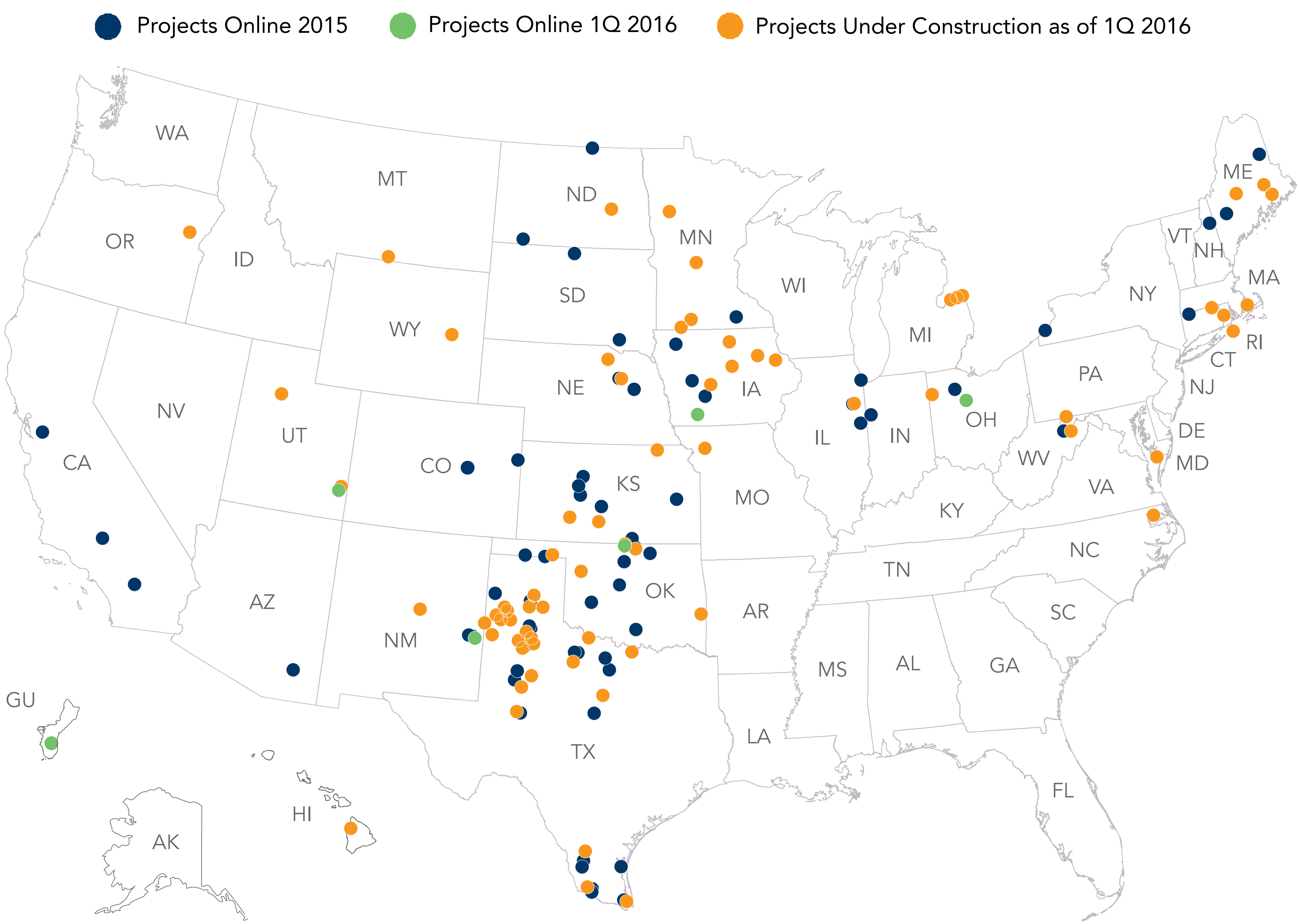
- More than 2,000 MW in new construction announcements were made during the first quarter of 2016, with more than 10,100 MW of total construction activity. This is an increase over the 9,400 MW reported at the end of 2015, although it does not yet mark a return to historic construction levels, due in part to the 5,001 MW that moved from under construction to operational at the end of 2015. The industry is expected to gain further momentum following the PTC extension.
- Projects reported as under construction are presumed to have taken steps to qualify for the PTC through safe harbor or physical construction.



Utility-Scale Wind Projects Completed in 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 Coop (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

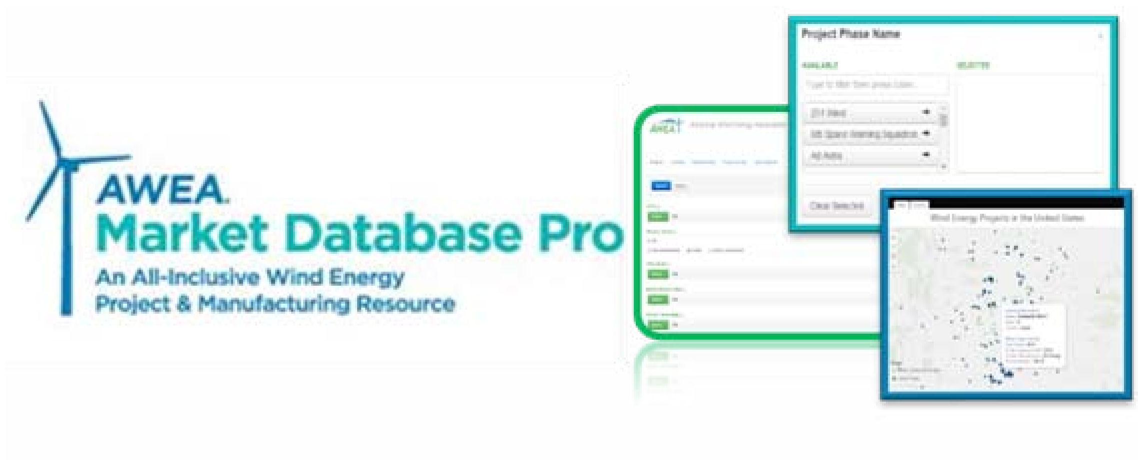
Map of Projects Online & Under Construction in 2016



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 First Quarter 2016 Market Report can be accessed at www.awea.org/1Q2016.

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.