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INDUSTRY AT LARGE

U.S. WIND POWER HEADS INTO 2014 WITH MOMENTUM

By Carl Levesque
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Last year was filled with transitional news concerning the wind energy industry, starting with the extension of the Production Tax Credit on Jan. 1, straight through the summer months and beyond, with announcements of new hires at supply-chain plants and project construction starts coming in.

So now that 2013 is in the books, how did the year turn out for U.S. wind energy, and what does it all mean for 2014? Industry numbers for the fourth quarter were not available at the time of this writing, but the American Wind Energy Association's (AWEA) U.S. Wind Industry Third Quarter 2013 Market Report provided a solid look at how things were shaping up. One of the top takeaways of the 3Q report, in fact, was that American wind energy would finish 2013 with strong momentum for installations in the new year. That momentum, which began building early last year thanks to Congress's last-minute PTC extension to kick off the year, follows two recent trends.

YEAR FOLLOWS RED-HOT 2012

First, it's important to step back a year earlier, to 2012, in order to gain a sense of historical perspective on the direction the industry is taking. The U.S. wind energy industry achieved its best year ever in 2012, shattering numerous records. It installed 13,131 megawatts (MW) of capacity and surged past the 60-gigawatt (GW) milestone for total installed wind power capacity. That year the industry invested over $25 billion in private capital to build new wind projects in the U.S., pushing the five-year average annual investment level between 2008 and 2012 to $18 billion.

The result: for the first year ever, wind energy was the number-one source of new electricity generating capacity, contributing 42 percent of all the megawatts the power sector installed. More than 180 wind projects were built.

The 60 GW installed today in the U.S. is enough generating capacity to power the equivalent of 15.2 million American homes. That's equal to all the households in the states of Colorado, Iowa, Maryland, Michigan, Nevada and Ohio combined. The wind power capacity now deployed can avoid nearly 100 million metric tons of carbon dioxide (CO_2) each year—equivalent to more than 4 percent of all power-sector CO_2 emissions.

Iowa and South Dakota now produce more than 20 percent of their electricity from wind energy. Furthermore, even some of the nation's largest state economies have significant wind power penetrations. The Electric Reliability Council of Texas (ERCOT), which operates the grid covering the vast majority of the Lone Star State, achieved the 10-percent milestone for wind energy on its system. Nine states now receive more than 10 percent of their electricity generation from wind energy.

COUNTER TREND

As project activity progressed at a red-hot pace in 2012, a shorter-term trend emerged, about which the industry urgently warned policymakers throughout that year. Projects were getting built at a record pace, yet at the same time, about mid-year, wind power's supply chain began to slow down as a result of the scheduled Dec. 31 expiration of the PTC, then only months away.

When Congress extended the PTC on Jan. 1, 2013, the policy signal the industry had been awaiting set in motion the steady buildup of momentum that continues to this day, as 2014 gets underway. That buildup came following the expected short-term dip in project construction—a dip that had been signaled by the earlier supply-chain slowdown.

The industry has grown rapidly in the U.S. in recent years in spite of the PTC being extended in short increments. As AWEA CEO Tom Kiernan said upon the release of the third-quarter market report, "It's remarkable how much this industry has been able to accomplish despite the lack of policy certainty over the years."

STRONG LONG-TERM TRENDS

Much of the reason for that success can be attributed to technological improvements, which are increasing the efficiency of turbines and driving down wind's costs. One key indicator of wind

energy's success and status as a familiar and mainstream energy source is evident when examining the electric-utility side of the business. In addition to the industry's record growth last year, another trend augured well for its future: new purchases of wind power. Through the third quarter, utilities signed over 5,670 MW of new power purchase agreements (PPAs) and received approval to build over 1,870 MW of utility-owned wind power. These 7,500 MW of new wind projects are helping spur wind manufacturing companies to once again increase hiring, and driving construction starts. Ground was broken on an impressive 1,100 MW of new projects during the third quarter, indicating a busy 2014. Utilities, in fact, have been procuring significantly more wind energy than their initial requests for proposals called for. That's because wind is saving their customers money. Utilities pursuing contracts for more wind than their initial solicitations called for include Xcel Energy, Detroit Edison, American Electric Power (Public Service Co. of Oklahoma), Austin Energy, and Omaha Public Power District.

Thanks to innovation and hard work, the industry is ahead of schedule for achieving the milestone of producing 20 percent of America's electricity by 2030 as outlined in the U.S. Department of Energy's landmark 2008 report showing the feasibility of reaching that benchmark. In light of the market dynamics such as improved technology and the industry's impressive performance that have emerged since the publication of the report, it was announced at the AWEA WINDPOWER 2013 Conference & Exhibition that an initiative is now underway to update the report. We'll see what news 2014 brings regarding that update.

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HEADLINES

UBS to acquire 50 percent of 161 MW Spinning Spur II project in Texas

EDF Renewable Energy and UBS International Infrastructure Fund announced in December that they have signed a definitive agreement under which UBS International Infrastructure Fund will acquire a 50 percent equity interest from EDF Renewable Energy in the 161 MW Spinning Spur II wind farm project, subject to completion of construction and customary conditions precedent.

Spinning Spur II, located in Oldham County Texas, commenced construction in June 2013, with an expected COD (Commercial Operation Date) on or about July 1, 2014. The project will be one of the first to take advantage of the new CREZ (transmission lines connecting the wind generating capacity of the Texas Panhandle to high electricity demand areas in the state.

DONG Energy acquires 580 MW Race Bank offshore project from Centrica

DONG Energy has acquired a 100 percent ownership interest in the UK offshore wind development project Race Bank, from Centrica. The project has a total consented capacity of up to 580 MW and is located in the Greater Wash area approximately 27 km off the east coast of England.

The purchase price (enterprise value) for the project is GBP 50 million (approximately DKK 450 million). The Race Bank project has

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SIEMENS LANDS LARGEST SINGLE TURBINE ORDER TO DATE

OEM will supply 1,050 MW to MidAmerican Energy for Iowa projects

Siemens has received an order from MidAmerican Energy for the supply of 448 wind turbines. With a total capacity of 1,050 MW, this represents not only the largest order for onshore wind turbines for Siemens, but also the largest single order for onshore wind power awarded globally to date. The wind turbines, each with a nominal rating of 2.3 MW and a rotor diameter of 108 meters, are to be installed in five different projects in Iowa. Siemens will also be responsible for service and maintenance of the wind turbines.

Iowa is one of the leading U.S. states in wind energy generation. In 2012, around 24 percent of

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GE, Mitsubishi reach settlement in patent litigation

Turbine OEMs keep patents, agree to cross-licensing of intellectual property

General Electric Co. and Mitsubishi Heavy Industries, Ltd. have mutually agreed to end longstanding legal battles surrounding wind turbine intellectual property, according to a statement from Mitsubishi Heavy Industries.

The two wind turbine manufacturers "have reached amicable settlement of all legal actions taken by both parties in the United States relating to alleged infringements of their patents on wind turbines," the statement read. "As a result, all litigation under way relating to wind turbines has been dropped."

The settlement involves a cross-licensing agreement in which each company grants use of its intellectual property to the other, while maintaining ownership of their respective patents. Both parties agreed not to disclose further details of the settlement, according to the statement.

The patent dispute dates back more than five years to February 2008, when GE petitioned the United States International Trade Commission (ITC) to investigate its claims that Mitsubishi Heavy Industries was importing wind turbines and components into the U.S. that infringed on three patents held by GE.

The patents in contention involved sustained operation of wind turbines without regard to changing wind speed and low voltage conditions, as well as severing a turbine's connection to the electrical grid in the event of power fluctuations.

The ITC ruled in favor of Mitsubishi in early 2010. However, GE's appeal to the U.S. Court of Appeals for the Federal Circuit led to a split decision handed down in February 2012. The appellate court upheld the ITC's decision on one case, while overturning a second case—sending it back to the ITC for further review. The court ruled the third case as moot due to the fact that the patent had since expired.

Litigation continued, with GE filing a claim surrounding the alleged infringement in federal district court in Texas in 2009. The case was stayed. In 2012, GE secured a $170 million jury award against Mitsubishi in another lawsuit concerning a different set of wind turbine patents. Prior to that verdict, Mitsubishi brought an antitrust suit against GE in May 2010, claiming that GE had obtained patents fraudulently. The antitrust case was placed on hold pending the outcome of the patent litigation and prior to the December settlement.

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received all major consents from UK authorities for the construction and operation of the wind farm.

USDA Providing $250 million to Rural Electric co-ops for Energy Efficiency Loan Program

The U.S. Department of Agriculture (USDA) will take new steps to save consumers money on their energy bills in partnership with rural electric cooperatives. It plans to provide rural electric cooperatives up to $250 million to lend to business and residential customers for energy efficiency improvements and renewable energy systems.

The program will help build a cleaner and more sustainable domestic energy sector for future generations by reducing barriers to investment in energy efficiency and potentially cutting energy bills for families and businesses in the process. Although energy efficiency measures can reduce home energy use considerably, many consumers and businesses do not invest in them because they lack the capital or financing to do so.

Funding will be provided to rural electric cooperatives and utilities which will then re-lend the money to help homeowners or businesses make energy efficiency improvements. In addition to energy audits, the loans may be used for upgrades to heating, lighting, and insulation, as well as conversions to more efficient or renewable energy sources.

First Wind and Burlington Electric sign 10-year PPA for Maine's Hancock Wind Project

First Wind has reached an agreement with Burlington Electric Department (BED) to sell the utility power generated from the planned Hancock Wind project near Ellsworth, Maine. First Wind will sell 25 percent of the power and renewable energy certificates (RECs) generated at the 51 megawatt (MW) wind farm for the next 10 years under a fixed-price agreement to the Vermont utility.

NREL taking Applications for National Executive Energy Academy through January 31

The Energy Department's National Renewable Energy Laboratory (NREL) is accepting applications for its 2014 Executive Energy Leadership Academy. NREL's Executive Energy Leadership Academy, also known as Energy Execs, is a program for non-technical decision-makers throughout the country to learn about renewable energy and energy efficiency technologies, analytical tools and financing. Leaders in government, communities, non-profits and the private sector are eligible.

There are two Energy Execs learning opportunities — the Leadership Program and the Leadership Institute. Both programs are designed to provide executive

decision-makers with information and tools to guide their organizations and communities in energy-related planning.

Apply online at www.nrel.gov/energyexecs/or via fax or mail. The application deadline is January 31, 2014.

Clean Energy Jobs Top One Million, Index Shows

Ecotech Institute's Clean Jobs Index, a tool to compare states' use and development of clean energy, found more than one million job postings in the clean energy sector from July 1, 2013, through September 30, 2013. This shows a 54 percent increase in needed clean energy employees, evidence that the sector is rapidly growing and in need of experts.

Ecotech Institute launched the Clean Jobs Index in January 2013 to provide objective job information about the clean tech industry. The Clean Jobs Index defines a clean tech job as one where workers make their business more environmentally friendly, use fewer natural resources, or produce goods or provide services that benefit the environment.

To learn more about the Clean Jobs Index, please visit www.ecotechinstitute.com/cleanjobsindex. To learn more about Ecotech Institute, go to www.ecotechinstitute.com.

SIEMENS LANDS LARGEST SINGLE TURBINE ORDER TO DATE Cont'd from pg 9

total power generation in the state was provided by wind power. Siemens has already installed 1.2 GW of wind power capacity for MidAmerican Energy to date. Including this new order, these wind projects will provide around 660,000 American households with eco-friendly power when they are completed in 2015.

The nacelles and hubs for the wind turbines of this major order will be assembled at the Siemens plant in Hutchinson, Kansas, and the rotor blades will be produced by Siemens in Fort Madison, Iowa.

"Siemens not only leads the way for offshore wind power worldwide, we are also a very successful player in the onshore wind industry," said Markus Tacke, CEO of the Wind Power Division of Siemens Energy. "In Europe and Africa alone, we successfully installed more than 1 gigawatt in the last fiscal year. This new order from MidAmerican Energy once again highlights that we are one of the leading suppliers in the U.S. wind power market."

DNV GL UNVEILS POST-MERGER BRANDING

The merger of DNV and GL in September led to the creation of DNV GL, a world leading ship and offshore classification society, a leading independent service provider in the oil and gas sector, a powerhouse in energy and renewables, and one of the world's top three certification bodies.

"Businesses are facing increasing technological, regulatory, social and operational challenges, in a world that is becoming ever more complex," DNV GL Group president and CEO Henrik O. Madsen said. "While at the same time, stakeholders are demanding greater accountability and transparency. To be confident they are making the right choices, both businesses and governments need an independent partner they can trust to empower their decisions," says Group CEO Madsen.

DNV GL is making a significant and continuous investment in strategic research and development. Innovative projects are taking technology and standards to new, advanced levels in collaboration with our customers.

"It was from this broader view that our new brand strategy of our expansive, expert services and customer enablement was created. The new visual identity with the three extended lines was created to symbolize our working context of sea, land and sky," DNV GL Group Chief Communications Officer Stefan Nerpin said.

Created from two highly respected companies whose parallel histories span almost 150 years, Nerpin is confident that the new DNV GL will "offer the businesses we serve much-needed benefits in terms of technical insight, risk management and knowledge transfer," he says, adding, "With our combined capabilities, more than 16,000 professionals are bridging technological and operational expertise to the greater goal of creating a safer and more sustainable society. DNV GL is able to offer this broader view across more than 100 countries, sharing our expertise and bringing best practices to our customers around the world."

The post-merger integration is progressing well and Group CEO Henrik O. Madsen says the new global entity is in "a good position to take on the first full year of operations as one company with a new brand; DNV GL. We want to build upon the knowledge and expertise throughout the group by creating new networks and learning from each other. Our goal is to make sure that we are always finding innovative solutions that create value and growth for our customers, ensuring that the world we leave behind is a better one than the one we find today," he concludes.

For more information, visit them online at www.dnvgl.com.