

DIRECTION

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GE Renewable Energy, Alliant Energy to add 470 MW in Iowa

GE Renewable Energy and Alliant Energy recently announced they are adding 470 MW of wind-power capacity to the state of Iowa with two projects.

The English Farms and Upland Prairie wind farms with respective 170 MW and 300 MW of installed capacity will be owned and operated by Alliant Energy's Iowa energy company and provide clean and reliable renewable sourced electricity to its customers in Iowa. This is part of a broader plan by Alliant Energy to install up to 1,000 MW in Iowa by the end of 2020.

Both wind farms will be equipped with a total of 190 of GE's 2 MW platform type turbines and will add to the 2,300 GE 2MW turbines already running in North America. These include the 2.3-116, the 2.5-116, and GE's newly introduced 2.5-127 turbine. The new 127-meter rotor combined with the robust 2MW electrical system enables the turbine to reach a best-in-class capacity factor and higher levels of Annual Energy Production.

"Both projects will provide power for the equivalent of 180,000 homes in Iowa," said Vikas Anand, general manager for GE's Onshore Wind Business in the Americas. "Alliant



The English Farms and Upland Prairie wind farms will be owned and operated by Alliant Energy's Iowa energy company. (Courtesy: GE Renewable Energy)

Energy and GE are making a real difference for consumers in Iowa, and we are delighted to be providing our 2MW class turbines, including our brand new 2x 127m model."

The Upland Prairie site, with 121 turbines planned, is the largest individual wind farm developed by Alliant Energy. Between Clay and Dickinson counties in Iowa, it is planned to be commissioned in late 2018 and early 2019. The English Farms site in Poweshiek County is planned to

operate 69 turbines, with the project being commissioned in early 2019.

"This cutting-edge technology will help us advance cost-effective clean energy for our customers," said Terry Kouba, Alliant Energy vice president of Operations in Iowa. "As we add more wind energy, we're working to keep Iowa a leader in renewable energy." ↵

Source: GE Renewable Energy

For more information,
www.ge.com/renewableenergy

Demand drives wind development to new heights in first quarter of 2018

Strong demand for affordable, reliable wind energy drove a busy first quarter for new U.S. wind farm announcements. Wind power's low cost and stable energy prices motivated utility and non-utility customers to sign contracts for 3,500 MW of U.S. wind capacity in the first quarter of 2018, a high-water mark in recent years, according to a new report released recently by

the American Wind Energy Association (AWEA). The U.S. Wind Industry First Quarter 2018 Market Report also reveals 5,523 MW in first quarter wind-project announcements, adding to a total of 33,449 MW of wind-power capacity in the combined construction and advanced development pipeline.

"Word is out that wind power is an excellent source

of affordable, reliable, and clean energy,” said Tom Kiernan, CEO of AWEA. “Our industry is consistently growing the wind-project pipeline as leading companies, including utilities and brands like AT&T and Nestle, keep placing orders. Strong demand for wind power is fueling an economic engine supporting a record 105,500 U.S. wind jobs in farm and factory towns across the nation.”

Utilities and Fortune 500 brands both continue to scale up investments in wind energy because it makes good business sense. The cost of wind power has fallen by two-thirds since 2009, making wind cost-competitive with other energy sources. In fact, in strong wind resource regions such as the Great Plains and Texas, wind is the most cost-effective source of new electricity. And because wind power has no fuel costs, buyers can lock in low rates for decades to protect against future fuel price spikes.

Wind-energy customers signed more than 3,500 MW in long-term contracts called power purchase agreements (PPAs) in the first quarter. That’s the highest volume of PPA announcements in any quarter since AWEA began tracking them in 2013.

Six companies including Adobe, AT&T, and Nestle signed wind PPAs for the first time, while Bloomberg, Facebook, Nike, and T-Mobile became repeat customers. In addition, utility buyers including PacifiCorp and DTE



The cost of wind power has fallen by two-thirds since 2009, making wind cost-competitive with other energy sources. (Courtesy: AWEA)

Energy made large-scale announcements to develop and own wind power.

Across the country, 36 wind projects representing a combined 5,523 MW announced they either began construction or entered advanced development in the first quarter. Construction started on 1,366 MW of wind capacity, and 4,158 MW entered advanced stages of development, which includes projects that have found buyers for their energy, announced a firm turbine order, or have been announced to proceed under utility ownership.

The full pipeline of wind farms under construction or in advanced development now totals 33,449 MW, a 40 percent increase over this time last year and the high-

est level since this statistic was first measured at the beginning of 2016.

Seven new wind farms came online across seven states in the quarter, totaling 406 MW. In total, there are now 89,379 MW of installed wind capacity in the United States.

That’s more than 54,000 wind turbines operating in 41 states plus Guam and Puerto Rico and enough installed capacity to power more than 27 million American homes.

Wind power is a 50-state industry supporting a record 105,500 U.S. jobs. ↵

Source: AWEA

For more information, go to www.awea.org

Windserve Marine, LLC to provide U.S. offshore wind support services

The Reinauer Group of Companies has added a new member company, Windserve Marine, LLC, to provide support services to the U.S. offshore wind industry. Joining its affiliate companies Boston Towing & Transportation, BTT Marine Construction, Erie Basin Bargeport, Reicon Group, Reinauer Transportation Companies, and Senesco Marine, Windserve starts a new chapter in the Group's rich history.

Windserve's mission: Windserve Marine seeks to be the premier offshore wind support services provider on the Atlantic Coast. Building upon more than 95 years in the maritime industry, Windserve is committed to providing excellence in all stages of the offshore wind farm lifecycle and supports industry stakeholders in project commencement and construction, operation and maintenance, and logistics.

The company intends to offer a range of services anticipating its ability to leverage the resources and synergies of its affiliate companies in the Reinauer Group. Capabilities will include personnel transfers, towing, escort and offshore support vessels, stores and equipment allocation and positioning, dive and survey operations, heavy equipment contracting and construction support, and engineering and logistics services.

Windserve is well-positioned to benefit from the expertise and coordination of its 24/7/365 operating platform.

"We are pleased to enter this burgeoning industry and capitalize on the depth of talent and infrastructure we already have in place," said Reinauer's Chief Executive Officer, Craig Reinauer.



Windserve Marine seeks to be the premier offshore wind support services provider on the Atlantic Coast. (Courtesy: Windserve Marine)

As a part of its unique value proposition, Windserve will be able to offer complete business solutions in addition to itemized services. Additionally, these offerings will be available at strategic locations in New York, Boston, and Rhode Island. ↗

Source: Windserve Marine

For more information, go to www.WindserveMarine.com

Monsoon wind speeds' impact on industry is mixed across Indian regions

Wind speeds during India's annual monsoon season have fallen by as much as 9 percent over the past two decades, with three of the past four years also below average. This is according to research by Vaisala, a global leader in environmental and industrial measurement. Vaisala's latest analysis, performed on global reanalysis datasets, highlights the impact of this decline, both on wind-energy production and on the suitability of long-term averages as a reference point for wind energy yield estimates.

Installed wind power capacity in India has rapidly expanded in recent years, currently totaling more than 32 GW and accounting for close to 10 percent of India's total power generation capacity, and the country typically sees its strongest winds during the southwest monsoon season.

However, it is clear that this fall in wind speeds pres-

ents challenges to the wind industry's ability to undertake accurate long-term forecasting and to asset-owners looking to effectively plan and budget on the basis of these forecasts.

Using data derived from NASA's MERRA-2 dataset, Vaisala has analyzed long-term wind speeds at seven significant regions for wind development in India. In each case, wind speeds trended downwards over a 20-year period up to 2017, but with significant variation in the extent of the decline — ranging from 9 percent at wind farms in Rajasthan to 2 percent at those in Karnataka. These results are partially corroborated by climate research from the Indian Institute of Tropical Meteorology, which shows a 40-percent reduction in surface wind speeds during monsoon season over the past four decades.

Despite this, analysis of performance over the past 12 months reveals above-average wind conditions in several regions, highlighting the importance of location when considering longer-term trends.

“It’s important to note that the declines didn’t happen across the board — for example, wind speeds were markedly higher than normal in parts of Uttar Pradesh during August and September, and higher in central India during July,” said Rajni Umakanthan, managing director of Vaisala subsidiary 3TIER India. “A scientific approach to both wind-resource assessment and energy forecasting can allow investors to minimize their risk and operators to budget effectively.”

Accurate long-term references are an important element in estimating energy production over the 20- to 25-year lifetime of a wind farm, and any adjustments to this reference can affect long-term energy production estimates by as much as 2 percent.

As a result of observed changes to the wind resource, a number of independent engineers have shifted their reference point from 20 to 10 years, but this creates additional challenges, as a shorter record will naturally introduce greater uncertainty into estimates and increase the possibility that they will not accurately reflect long-term energy production.

Vaisala’s Energy Risk Framework, developed in 2012,

was designed to account for the possibility that long-term trends or jumps in mean wind speed might occur due to climate change. Using re-analysis data, the Energy Risk Framework adjusts and refines long-term estimates by defining the likelihood that recent wind speeds are consistent with past data.

“Our analysis illustrates the stark decline in Indian monsoon wind speeds — both year-on-year and over the past two decades — and is consistent with results recording weaker surface wind speeds,” Umakanthan said. “Our Energy Risk Framework seeks to address this by comparing recent wind speeds with long-term performance data, defining the likelihood that recent data is consistent with past performance. A shortening of the long-term climate reference is then calculated and applied when appropriate to refine the energy due diligence process and provide asset owners with the best reference possible.”

Vaisala continues to refine the Energy Risk Framework by incorporating additional wind-speed analysis and testing conducted as part of its continuous validation process. ↵

Source: Vaisala

For more information, go to www.vaisala.com

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