

Building Energy's First Wind Farm Begins Operations



Building Energy's Iowa wind facility consists of 10 3.0 MW geared onshore wind turbines. (Courtesy: Building Energy)

Building Energy SpA, a multinational company operating as a global integrated IPP in the Renewable Energy Industry, through its subsidiary Building Energy Wind Iowa LLC, recently announced the inauguration of its first wind farm in Iowa, which adds up to 30 MW of wind-generation distribution capacity. The project, north of Des Moines, will generate approximately 110 GWh per year.

The beginning of operations was celebrated on the Wind of Life event in Ames, Iowa, attended by Andrea Braccialarghe, MD America of Building Energy; Alessandro Braganti-ni, chief operating officer of Building Energy; Giuseppe Finocchiaro, Italian consul general; and George Revock, managing director and head of alternative energy and project finance at Capital One Bank.

The overall investment in the construction of the Iowa distribution generation wind farms amounted to \$58 million, and it sells its energy and related renewable credits under a bundled, long-term power purchase agreement with a local utility. Capital One Bank is committed to a tax equity contribution of approximately \$33 million to the project.

The wind facility, developed, financed, owned, and operated by Building Energy, consists of 10 3.0 MW geared onshore wind turbines, each with a rotor diameter of 125 meters mounted on an 87.5-meter steel tower.

The energy generated will power 11,000 U.S. households every year while avoiding the emission of about 70,000 tons of CO₂ emissions according to U.S. Environmental Protection Agency methodology, which is equivalent to taking 15,000 cars off the road each year.

Besides the environmental benefits, the wind farm also has advantages for the local communities, providing it with clean energy and creating jobs for local Iowans. The project involved more than a hundred of local skilled workers during the construction phase. Some of those jobs will be permanent as necessary

for the operation and maintenance activities as well as for additional services such as delivery, transportation, spare parts management, landscape mitigation, and further environmental monitoring studies. The developmental stage of the wind farm required a vast number of studies, including environmental surveys, title surveys, engineering studies, and wind-resource studies, that were carried out by local engineering firms, law firms, and various advisers such as a local university.

The company has been present in many states since 2013 with more than 500 MW of projects under development, spread across different renewable energy technologies.

“We are extremely proud to begin operations of our first wind farm in Iowa and to celebrate with the whole Iowa community through this inauguration ceremony,” Braccialarghe said. “Taking advantage of the strong wind resources in the state of Iowa, the project has been bringing benefits to the local economy with new job positions since the projects’ developmental stage and will continue to do so throughout the life of the plants. The wind farm will span six different towns, Huxley, Kelley, East Ames, East Nevada, Grinnell, and Alden, in order to provide renewable energy to as many local communities as possible respecting the environment without impacting residential areas or conflicting with agricultural or livestock activities, while at the same time keeping electricity rates stable and affordable.”

Source: Building Energy

For more information, go to www.buildingenergy.it



Broadview Wind has the capacity to generate 324 MW of energy.
(Courtesy: Pattern Energy Group)

Pattern Energy Acquires Broadview Wind

Pattern Energy Group Inc. has acquired interests in the two wind projects that comprise the 324 MW Broadview Wind power facilities and associated independent 35-mile 345 kV Western Interconnect transmission line from Pattern Energy Group LP for \$269 million, consisting of cash consideration of \$215 million and an assumed project loan of \$54 million. Broadview, located 30 miles north of Clovis, New Mexico, commenced commercial operations in late March.

“This extraordinary project brings inexpensive renewable power from eastern New Mexico, one of the highest wind areas in the West, using dedicated transmission capacity from several transmission systems into California,” said Mike Garland, president and CEO of Pattern Energy. “Broadview’s production complements production from California’s domestic renewable resources helping California transition to a carbon-free, low-cost, renewable grid. We are especially

excited to bring this project on line because Pattern Development is actively developing several significant opportunities in New Mexico and the southwest U.S. as part of the region’s increasing demand for low-cost, renewable energy. These new opportunities will be subject to our ROFO as part of our relationship with Pattern Development.”

Pattern Energy has acquired from Pattern Development 1.0 an 84 percent initial cash flow interest in Broadview and a 99 percent ownership interest in Western Interconnect. Institutional equity investors have acquired from Pattern Development 1.0 a 16 percent initial cash flow interest in, and a 99 percent initial taxable income allocation from, Broadview. Following the acquisition, based on its initial cash flow share, Pattern Energy retains an owned interest of 272 MW in Broadview. Pattern Energy’s commitment to own and operate the facility was a core component of securing high-quality

institutional equity investors for the project financing.

Pattern Energy acquired Broadview and Western Interconnect for \$269 million, including cash consideration of \$215 million and an assumed project loan of \$54 million secured by Western Interconnect. The cash consideration was funded from available corporate liquidity. The Western Interconnect loan commitment was originally secured at the time of the agreement to acquire Broadview in June 2016. The interest on the debt is 90 percent swapped over the 19-year amortization term. The debt has a maturity of 10 years.

Broadview will begin receiving both pay-as-you-go (“PAYGO”) contributions from Broadview’s tax equity investors and certain New Mexico production tax credits starting in 2018. Based on the expected timing of these cash flows and assuming normal wind conditions, Pattern Energy expects the CAFD contribution, after deduction of Western Interconnect financing costs, to be \$18 million in 2018 and to increase approximately \$2.5 million a year thereafter through 2022. This results in a five-year average CAFD of \$23 million per year and a 9.3x CAFD multiple, based on the cash consideration of \$215 million paid to acquire Broadview and Western Interconnect.

Broadview consists of 141 Siemens 2.3 MW wind turbines and has the capacity to generate 324 MW of energy, the power equivalent to the annual energy usage of approximately 180,000 California homes. Broadview is limited to 297 MW of injection capacity at Broadview’s transmission interconnection point.

Broadview has entered into two 20-year power purchase agreements (“PPAs”) with Southern California Edison (“SCE”), which has a BBB+/A2 credit rating, for sale of 100 percent of the output, up to a total of 297 MW, which has been factored into Broadview’s economics.

Broadview interconnects to the Western Interconnect transmission project, a 345 kV transmission line, approximately 35 miles in length. To wheel the output from Broadview to the California Independent System Operator system where it is delivered to SCE, Broadview has entered into long-term, firm, point-to-point transmission service agreements to move the output through the Western Interconnect, Public Service of New Mexico and Arizona Public Service transmission systems. ↴

Source: Pattern Energy Group

For more information,
go to patternenergy.com



The Vormark wind farm in Brandenburg, Germany.
(Courtesy: CEE Group)

CEE Group Acquires 27.6 MW Wind Farm in Brandenburg

CEE, the Hamburg-based private equity group, continues to expand its wind power portfolio in Germany with eight wind turbines in the Vormark wind farm in Brandenburg. The seller is a consortium consisting of the Danish company European Energy A/S and the Berlin-based Green Wind Energy GmbH.

The wind farm consists of eight turbines (type Vestas V126, 3.45 MW). The hub height is 137 meters with a rotor diameter of 126 meters. The overall capacity of the wind farm 27.6 MW. The turbines, commissioned in February and March, will supply environmentally friendly power to about 21,000 households. CEE Operations, which manages the CEE Group’s power plant portfolio, is responsible for the commercial operations. Green Wind Operations GmbH, a sister company of Green Wind Energy GmbH, will assume responsibility for technical operations.

“We are pleased to have grown further in our core German market by acquiring the Vormark wind farm,” said Detlef Schreiber, CEE Group’s CEO. “After the acquisition of the Gollenberg wind farm a few months ago, this renewed expansion of our overall portfolio underlines the CEE Group’s strong position in a competitive market.”

“To acquire a wind project of this size in the current market environment is a very positive start to 2017 for our investors and for us,” said Jens Schnoor, the responsible investment director of CEE Management. “We hope that this first transaction with European Energy A/S and Green Wind Energy marks the beginning of a longer period of collaboration.”

“We are focusing increasingly on the repowering of old turbines, and in Gross Pankow we have doubled the megawatt capacity by deploying new, highly efficient turbines,” said Martin Kühn, managing director of Green Wind Energy GmbH and project developer of the wind farm. “Green Wind, together with European Energy, has found a strong partner in the CEE Group, which pursues a sustainable energy policy. In our view, repowering will also play a significant role in this connection even after the introduction of the new Renewable Energies Act (EEG).”

“With the successful implementation of the project in Vormark, we were once again able to demonstrate our expertise in the German market as one of our core markets,” said Knud Erik Andersen, managing director and main shareholder of European Energy A/S. “In addition, the project testifies to our expertise in the field of repowering. We are pleased to collaborate with experienced partners such as the CEE Group and Green Wind Energy and also see new opportunities for cooperation in the future.”

Following the acquisition of the Vormark wind farm, the CEE Group’s renewables portfolio has grown to about 585 MW. In 2017, CEE’s energy parks will probably generate around 920,000 MWh of electricity from renewable sources. *✍*

Source: CEE Group

For more information, go to www.ceegroup.net



The Buffalo Bill Center of the West’s exhibition showcases a broad range of efforts underway to ensure the golden eagle remains a vital component of western ecosystems and our natural heritage. (Courtesy: Moosejaw Photography)

Eagle Exhibition Gets Duke Energy Grant

The Buffalo Bill Center of the West received a \$50,000 grant from Duke Energy Foundation in support of Monarch of the Skies, an exhibition about golden eagles and their habitats. The project presents the natural and cultural history of the golden eagle and its conservation in Greater Yellowstone and western United States.

The exhibition is slated to open in spring 2018.

Charles R. Preston, wildlife scientist and the center’s Willis McDonald IV senior curator of the Draper Natural History Museum, leads the design effort.

“This exhibition provides a wonderful opportunity to share the adventure, results, and application of scientific research by our own team and by others across the western United States,” Preston said. “And we are delighted to receive this support from Duke Energy, an important stakeholder and contributor to golden eagle conservation for the future.”

“Golden eagles thrive in some of the windiest places in the country, which include the open plains of Wyoming,” said Tim Hayes, Duke Energy Renewables environmental director. “This same abundant wind resource can be tapped to make clean and increasingly affordable electricity, but this overlap sometimes creates a conflict between golden eagle habitat and wind farms. Our primary focus for several years has been figuring out a way for wind turbines and eagles to coexist.”

Based on a decade of extensive field research conducted by the Center’s Draper Natural History Museum, the eagle exhibition immerses visitors in the power, beauty, and cultural and ecological significance of North America’s most powerful raptor. The exhibition integrates interpretive text, graphic panels, and audiovisual components with interactive features. In addition, the project’s plan includes stunning photographs, a

“We are delighted to receive this support from Duke Energy, an important stakeholder and contributor to golden eagle conservation.”

reproduced sandstone cliff nest site, three-dimensional models, mounted specimens, and Plains Indian ethnographic objects.

Golden eagle strongholds in sagebrush grasslands are undergoing rapid changes, and scientists are concerned about the impacts on eagles and associated wildlife. The “Challenges and Opportunities” section of the exhibition is designed to focus on the human-caused threats to golden eagles and associated wildlife, and the efforts of multiple stakeholders to reduce and mitigate negative impacts. One challenge golden eagles face in today’s West is increased mortality

due to collisions with the growing numbers of wind turbines.

“At Duke Energy Renewables’ wind sites, we are continually refining ways to reduce the risk of golden eagles and other soaring raptors from colliding with wind turbines,” Hayes said. “Our Top of the World wind site near Glenrock, Wyoming, has tested radar, visual and sound deterrents and is currently using a camera detection system called IdentiFlight as well as human observers to curtail turbines when eagles are present, thereby reducing collisions.”

The exhibition showcases these and a broad range of other efforts underway to ensure that the golden eagle remains

a vital component of western ecosystems and America’s natural heritage.

“These magnificent raptors are a true apex predator and have never had to worry about something harming them while they are flying,” Hayes said. “We have more work to do, but through partnerships with scientists like Dr. Preston, technology developers like IdentiFlight, and organizations like the American Wind Wildlife Institute, I’m confident we will find viable solutions.”

Source: Duke Energy Renewables
For more information, go to
www.duke-energy.com/renewables

Fort Hood Facilities Enter Commercial Operations

The U.S. Army’s largest single renewable energy project began officially generating clean electricity in April. Apex Clean Energy developed, managed construction of, and operates the groundbreaking hybrid wind and solar complex, which will provide more than 50 percent of the annual load at U.S. Army Garrison Fort Hood in Killeen, Texas.

Apex and Northleaf Capital Partners own the renewable energy portfolio of which the complex is a part: the 50.4 MW Cotton Plains Wind and 151.2 MW Old Settler Wind facilities in Floyd County, Texas; and the 15.4 MWac Phantom Solar on-site at Fort Hood.

The Defense Logistics Agency-Energy, on behalf of the Army, is purchasing the power from Cotton Plains Wind and Phantom Solar to supply energy to Fort Hood. The two facilities will save the Army — and taxpayers — an estimated \$168 million in direct

energy costs over the life of the project. Old Settler Wind, meanwhile, is generating enough clean electricity to power 51,000 average U.S. homes. Apex is providing asset management services for all three facilities.

“With our deep corporate ties to the military, Apex is honored to partner with the Army on its goals to increase our country’s energy independence and protect our national security,” said Mark Goodwin, president and CEO of Apex. “We are all proud to help Fort Hood.”

“We are pleased to partner with Apex, given the company’s reputation as a leading renewable energy company,” said Jared Waldron, a director at Northleaf. “Direct investments in fully contracted wind and solar assets are consistent with Northleaf’s investment strategy.”

Source: Apex Clean Energy
For more information, go to www.apexcleanenergy.com

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