

Acciona's South Texas Wind Farm Begins Commercial Operation

Acciona Energy, a leading global operator of renewable energy projects, recently announced the San Roman Wind Farm has begun commercial operation. The 93 MW San Roman project is Acciona's eighth wind farm in the U.S and brings the company's total U.S. wind capacity to 721 MW.

San Roman is near Brownsville, Texas, and is equipped with 31 AW125/3000 turbines manufactured by Nordex/Acciona Windpower. Each turbine has a rotor diameter of 125 meters and is mounted on an 87.5-meter steel tower.

In addition to owning and operating the project, Acciona served as general contractor for San Roman's construction, completing the project in about 11 months while generating more than 100,000 hours of work for local contractors and maintaining a near-perfect safety record. Acciona has hired a team of local employees to manage the wind farm's long-term operations and maintenance.

"Acciona is proud to complete this latest addition to our U.S. renewable energy portfolio and become a part of the community here in Cameron County," said Ilya Hartmann, CEO of Acciona Energy North America. "Acciona's expertise as a global leader in renewable energy, along with the great work of our local partners and contractors, helped make this project a success."

The new facility will produce enough electricity to power more than 30,000 Texas homes. Over its 25-year lifespan, San Roman is expected to generate \$30 million in tax revenue for local school districts and other public services, as well as more than \$25 million in lease payments to local landowners.



The 93 MW San Roman project is Acciona's eighth wind farm in the U.S and brings the company's total U.S. wind capacity to 721 MW. (Courtesy: Acciona)

Acciona demonstrated its commitment to sustainability during the development and construction of the San Roman Wind Farm by performing extensive wildlife studies prior to construction and providing safety and environmental training for all staff on the project.

The company also conducted a social impact analysis to understand the project's effect on local stakeholders. Based on this analysis of community needs, Acciona chose to establish a scholarship fund and a community benefit fund to support education and job growth in the area.

1,500 MW IN NORTH AMERICA

Acciona owns 721 MW of operating wind-power capacity in the United States, including the San Roman Wind Farm in Texas, three wind farms in Oklahoma (329 MW), one in North and South Dakota (180 MW), one in Illinois (100.5 MW), and another two in

North Dakota and Iowa (12 MW and 6 MW respectively). It also has a 64 MW concentrating solar-power plant in Nevada.

The company also has 181 MW of operational wind-power capacity in Canada (in Alberta, Ontario, and New Brunswick) and 556 MW in Mexico (all in Oaxaca).

With the new wind farm, Acciona Energy's renewable energy capacity in North America now exceeds 1,500 MW. Acciona recently announced that it will construct a new 168 MW wind farm and a 227 MWp solar plant in Mexico by the end of 2018.

Acciona has committed to invest about \$2.5 billion by 2020 to build new renewable energy installations worldwide, increasing the company's capacity by about 1,900 MW. ↘

Source: Acciona

For more information, go to www.Acciona.com

Avery Dennison Partners with Apex on Wind-Energy PPA

Global labeling and packaging materials manufacturer Avery Dennison Corporation has signed a wind-power purchase agreement (PPA) with Apex Clean Energy to offset 50 percent of the company's U.S.-based greenhouse gas emissions derived from electricity consumption, signaling commitment by Avery Dennison to renewable energy and energy efficient practices and technology.

Under the agreement with Apex's Perryton Wind, a 299.91 MW wind-energy project in Ochiltree County, Texas, Avery Dennison will purchase 20 MW of renewable energy capacity. The PPA is a key component of Avery Dennison's 2025 sustainability goal to reduce absolute greenhouse gas emissions from its operations by at least 3 percent annually, and by at least 26 percent overall, between 2015 and 2025, made as part of the company's new participation in World Wildlife Fund's (WWF) Climate Savers Program. Perryton will be Apex's fifth Texas wind farm, powering the equivalent of 108,000 U.S. homes. The facility will consist of 130 Siemens 2.307 MW turbines.

According to Roland Simon, vice president of global procurement and global sustainability leader at Avery Dennison, the partnership with Apex is one of the ways Avery Dennison continues to create shared value for the company, the industry, and communities worldwide. He noted that the PPA will provide clean, renewable electricity equal to 50 percent of the power consumed by Avery Dennison's U.S. operations.

"It's important for us to optimize renewable energy sources in a way that ripples outward to create change that encompasses far more than our own business," Simon said.

Apex, an independent energy solutions provider, was awarded a 2016 Green Power Leadership Award by the Center for Resource Solutions in October for its leadership in bringing wind capacity to market and its expansion of direct purchasing of clean energy by the public and private sectors.

"We leverage the depth and breadth of our national pipeline of projects, and we are committed to tai-

loring solutions that meet the specific goals of our corporate, utility, and public sector partners, from a facility purchase to a structured PPA," said Steve Vavrik, Apex's chief commercial officer. "The commitment to long-term renewable energy purchasing by companies such as Avery Dennison is providing a strong drive in the market to bring more clean energy to the grid."

Avery Dennison's investment in renewable wind power demonstrates its continued focus on energy efficiency and energy reduction. The agreement with Apex comes on the heels of Avery Dennison joining World Wildlife Fund's (WWF) Climate Savers Program, a global group of partner companies engaged in the transition to a climate-friendly economy.

Additional goals set with WWF include covering the equivalent of 100 percent of electricity consumption at Avery Dennison's U.S. operations with renewable energy by 2025 and addressing climate change through other areas of operations, such as maximizing use of paper made with recycled or certified wood fiber (sourcing only from certified sources by 2025).

"We recognize Avery Dennison for its strong leadership in sourcing more renewable energy to help achieve the company's emission reduction target," said Matt Banks, climate and business manager at WWF. "As our newest Climate Savers partner and as a signatory of the Renewable Energy Buyers Principles, Avery Dennison has called for increased access to cost-effective renewable energy that will lead to measurable reductions in its greenhouse gas emissions while demonstrating to other companies the business and environmental value of scaling up to achieve a 2025 target."

"Working in partnership with WWF is part of our commitment to sustain a thriving business that is a force for good — one that generates value, in every respect, for all involved," Simon said. ↵

Source: Avery Dennison

For more information, go to www.averydennison.com

BASF Solutions for Wind Energy Comply with China Guidelines

The comprehensive wind-energy industry portfolio offered by BASF's Coatings division already satisfies the threshold limit values for industrial coatings expected to come into effect by 2022 in Beijing/China.

To curb air pollution in China's capital, the Beijing

Municipal Bureau of Environmental Protection has adopted a policy paper that provides for the two-stage reduction of emission levels for maintaining and repairing wind turbines and other structures. In line with this regulation, the threshold values that were

valid up to the end of 2016 will be tightened again in 2017.

BASF focuses on energy-efficient and resource-conserving formulations for both manufacturing and application of its products. Coating solutions for wind turbines developed and sold under the Relest brand feature high-abrasion resistance and elasticity and thus offer long-lasting protection from extreme weathering impacts. Rotor-blade surfaces in particular have to withstand extreme stresses such as wind, hail, and rain. For this purpose,

BASF has developed a special coating system consisting of gelcoat, putty, edge protection, and topcoat. The consistently used two-component polyurethane compounds offer an especially ecological alternative to solvent-borne products and thus comply with the VOC guidelines, including the tightened threshold values for use in Beijing. ↴

Source: BASF

For more information, go to www.basf-coatings.com

Microsoft Makes Largest Wind-Energy Purchase to Date

Microsoft Corp. recently made its largest purchase of wind-energy to date with the signing of two agreements. Combined, these agreements represent 237 MW of wind energy, which brings Microsoft's total investment in wind energy projects in the U.S. to more than 500 MW.

"Microsoft is committed to building a responsible cloud, and these agreements represent progress toward our goal of improving the energy mix at our datacenters," said Brad Smith, president and chief legal officer at Microsoft. "Our commitment extends beyond greening our own operations because these projects help create a greener, more reliable grid in the communities in which we operate."

Microsoft has contracted with Allianz Risk Transfer (ART) to fix its long-term energy costs and purchase the environmental attributes connected with the new, 178-MW Bloom Wind project in Kansas. The project is the first to use a novel structure developed by ART and designed to offset high upfront costs associated with the creation of large-scale wind projects. Microsoft is the first buyer to participate in this structure, which has the potential to bring clean-energy projects online at a faster pace.

"It is important for investors in renewable energy projects to secure long-term, stable revenues, and our structure does just that," said Karsten Berlage, managing director of ART. "We are thrilled to be partnering with Microsoft on this groundbreaking project."

In addition, Microsoft has contracted with Black Hills Corp. subsidiary Black Hills Energy, under a long-term agreement, to purchase 59 MW of renewable energy certificates from the Happy Jack and Silver Sage wind projects, which are adjacent to Microsoft's Cheyenne, Wyoming, datacenter. The combined output of the Bloom and Happy Jack/Silver Sage projects will produce enough energy on an annual basis to cover the annual energy used at the datacenter.

"Our longstanding partnership with Microsoft productively led to this landmark collaboration. This collaboration provided them the opportunity to utilize significantly more renewable energy while still ensuring the reliability they've come to expect through our energy infrastructure and generation resources," said David R. Emery, chairman and CEO of Black Hills Corp. "We are proud to be a strong supporter and partner in their mission to power their datacenters with increased renewable energy resources and look forward to our continued collaboration in the years ahead."

Microsoft and Black Hills Energy also worked together to create a new tariff, available to all eligible customers, that allows the utility to tap the local datacenter's backup generators, thereby eliminating the need for Black Hills Energy to construct a new power plant. The tariff received approval from the Wyoming Public Service Commission in July.

"We are constantly looking for new ways to approach energy challenges and avenues of engagement with our utility partners," said Christian Belady, general manager of cloud infrastructure strategy and architecture at Microsoft. "The team worked closely with ART to come up with a completely new model to enable faster adoption of renewables. Likewise, the tight engagement with Black Hills created the opportunity for Microsoft's datacenter to become an asset for the local grid, maintaining reliability and reducing costs for ratepayers. This kind of deep collaboration with utilities has great potential to accelerate the pace of clean energy, benefiting all customers — not just Microsoft."

These are Microsoft's third and fourth wind-energy agreements, joining the 175-MW Pilot Hill wind project in Illinois and 110-MW Keechi wind project in Texas. ↴

Source: Microsoft

For more information, go to news.microsoft.com

PERSPECTIVE

Clean Energy Appears To Be Safe under Trump

Like a lot of Americans who work in clean energy, I worried coming into the election about what a Trump presidency might mean for our industry and all of the public benefits it provides.

Candidate Trump, after all, railed at rallies that renewable energy “is not working so good.” He complained about solar’s payback time. Of wind power, which now supplies about 5 percent of the country’s electricity, employs 88,000, including more than 21,000 in manufacturing, and, in a growing number of places, is the least expensive form of new generating capacity available.

SHORT-TERM GOOD

Now that the election has come and gone, I can’t say I’ve learned to stop worrying and love the bomb. But I can tell you I think Donald Trump will be good for clean energy in the short term at the least, lighting a fire under project developers who are pretty nervous about possible changes in federal policy and incentives. That’s the case even though two key drivers of clean-energy deployment, the federal Investment Tax Credit and the Production Tax Credit, have strong, bipartisan support and are thus unlikely to be repealed since they already are scheduled to sunset over the next several years.

The efforts of developers across the country will likely bump up

**William Liuzza***Founder and CEO*

CEO of EnergeiaWorks

the rest of the supply chain — manufacturing, distribution, and construction — faster than we first anticipated. Think wind power before the 2014 expiration of the federal Production Tax Credit. That amped-up deployment can, in turn, help us solidify important industry trends and gains we’ve seen in recent years, including precipitous price declines, increased investment in research and new technologies, and more competition in the marketplace. All these can make wind and other clean energy more accessible to customers big and small and can make it a bigger player in the American industrial landscape.

UNINTENDED CATALYST

With Donald Trump’s election as an unintended catalyst, our industry can continue to create more jobs, cut more carbon pollution from our energy supply, help our kids breathe increasingly cleaner air, and lower energy costs for everyone. That’s true no matter what the president-elect

has said about global warming.

We should take this opportunity and run with it.

I know we’re at an especially historic moment because of what our organization hears from the companies we work with as recruiters. “Since the election, we are operating in a policy environment for renewable energy in which the medium to long term is unclear at best,” notes Jon Rappe, senior vice president of renewable project developer ImMODO Energy Services. With good state and federal policies currently in place, at least for now, “we are staffing up and trying to get as many projects as possible in the ground before any new administration policies may take effect.”

GOING FULL THROTTLE

It’s not just ImMODO that feels this way. One overseas renewable developer expanding into the U.S. market has told us to go full throttle on hiring now. Before the election, he had a slower schedule.

William Liuzza is the founder and CEO of EnergeiaWorks, a global clean energy executive recruitment firm. Liuzza is an accomplished writer and public speaker for renewable energy hiring trends. He also manages “Renewables UnWind,” a networking event for clean tech that has hosted thousands of professionals in cities around North America.

Another industry source, Brian Hill, the general manager of Bachmann said, “Our primary focus in the U.S. wind energy market is on operating assets, and those aren’t going anywhere soon, no matter who is in office.

I expect our plans to support these wind farms will lead to additional work for contract technicians, project managers, and engineers. Regarding the overall growth in the wind, I believe the momentum of the industry would be very difficult to reverse at this point, especially in light of the price of wind energy compared to other sources, and recent trends of corporations such as Google, Amazon, and Microsoft securing large contracts for renewable energy. This continued growth should lead to manufacturing jobs throughout the OEM production chain.”

Another industry insider, Benoy Thanjan of Reneu Energy, notes that much of “the growth in solar and wind has been driven by state-level policies and incentives and steep price declines in building projects. These two drivers are probably not going to stop.”

Indeed, for 2015, wind and solar ranked No. 1 and No. 2 in terms of new electric generating capacity brought online, outpacing natural gas and other sources despite significant price drops for fossil fuels.

AMERICA LOVES CLEAN ENERGY

This new growth can help us mature as an industry, but it can also do more than that. The American public already loves clean energy by overwhelming margins. That’s true not just of Clinton fans but Trump supporters, too. Seventy-seven percent of them favor wind power, and 88 percent like utility-scale solar.

We should highlight the benefits we bring to the nation, like wind-sector job growth of 20 percent in 2016 or solar job growth that has averaged more than 20 percent per year over the last six years. Or how our industries can offer those without college degrees middle-class incomes, rather than the low-wage jobs that are too often their only other alternatives.

We should highlight that investment in renewable energy boosts local economies and creates jobs in the U.S. that cannot be outsourced such as construction, transportation, operations, and maintenance.

ACCELERATING TRANSITION

We should talk up the more than 500 wind-power component

manufacturers we have in 43 states. These next few years are the time we should use to press our advantages with policymakers in Washington. They have an enormous impact on our industry’s growth and our ability to deliver the public benefits of clean energy that make us so proud.

Donald Trump’s electoral college victory is not something many of us in the clean-energy community thought would benefit our industry and the country and planet it serves. But we can use the next few years to do what we do best: accelerate the transition to a clean energy future.

Especially with our industry working as advocates, the idea that a Trump presidency can put a stop to clean-energy growth just might be the biggest hoax of all. ↵



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