

DIRECTION

THE FUTURE OF WIND



Avangrid's 200 Golden Hills wind farm in Sherman County, Oregon, will provide enough clean, renewable electricity to Puget Sound Energy to power more than 60,000 homes annually. (Courtesy: Avangrid Renewables)

Avangrid Oregon wind farm begins operations, will power 60,000 homes

Avangrid Renewables recently announced that it began operations April 29 at its 200 MW Golden Hills wind farm in Sherman County, Oregon. The facility will provide enough clean, renewable electricity to Puget Sound Energy (PSE) to power more than 60,000 homes annually.

“Delivering on this project represents an important milestone for Avangrid Renewables as we continue to build on our robust portfolio of projects in the Pacific Northwest region and advance our position as a leading renewable energy developer in the U.S.,” said Jose Antonio Miranda, Avangrid Renewables’ president and CEO, Onshore. “We are pleased to work with Puget Sound Energy to help it meet its ambitious goals to reduce emissions and provide clean, reliable power to its customers.”

The project will help PSE meet its goals to reduce carbon dioxide emissions while providing additional capacity to serve customers, particularly during winter periods of high electricity demand. The project is Avangrid Renewables’ seventh wind project in Sherman County, 11th in Oregon, and 14th in the Pacific Northwest.

“We are excited for this next step and what this partnership with Avangrid Renewables means as we continue to build on our history of championing renewable energy in the Pacific Northwest,” said Ron Roberts, PSE vice president of energy supply. “This new wind project will enable us to expand our efforts toward providing clean, reliable electric service to all of our customers as we work together to create a clean energy future for all.”

The addition of the Golden Hills wind project increases PSE’s owned and contracted wind fleet to more than 1,150 MW.

The Golden Hills Wind Farm is near the town of Wasco, Oregon. The project includes 41 Vestas V150 4.3 MW turbines and 10 GE 116 2.5 MW turbines. The farm is spread across about 28,000

acres of grazing and dry-land wheat farmland held by 37 landowners. Avangrid Renewables started construction on the project in May 2020.

The project will employ about 13 full-time employees and is expected to deliver more than \$220 million in landowner payments and local taxes over the lifetime of the project.

MORE INFO www.avangridrenewables.com

Many industry leaders expected for solar, wind North America

Reuters Events recently announced senior representatives from Avangrid Renewables, Longroad Energy, EDF Renewables, ENGIE, Invenergy, EDP Renewables, and Arevon Energy have confirmed to speak at Reuters Events: Utility Scale Solar and Wind North America 2022 Conference and Exhibition, June 21-22 in Dallas, Texas.

The executive lead event will connect 400-plus representatives from the U.S. solar and wind value chain including asset managers, operators, developers, utilities, OEMs, and service providers to optimize their asset operation and management for maximum revenue.

Over two days, the conference agenda will address cross wind and solar challenges such as grid constraints, PPAs, supply chain, and then, with two dedicated wind and solar tracks, to deep dive into the technical O&M and asset management strategies.

Backed by the industry, speakers sharing their solar and wind strategy include:

► Dana Herrera, General Manager, Asset Management, Renewables, Shell.

► Jorge Pedron, COO, Avangrid Renewables.

► Dan Summa, EVP, Asset Optimization, EDF Renewables.

► John Windsor, SVP, Renewable Generation, Liberty Power.

► Laura Caspari, VP, Head of Power Marketing and Commercial Strategy, ENGIE.

► Gabriel Yamal, Director of Development - Western Region (US) and Mexico, EDP Renewables.

► Meghan Semiao, Director, Asset Management, Longroad Energy.

► Anand Narayanan, VP, Asset Management, Arevon Energy.

► Cristina Drivas, Director, Power Marketing, C&I, Lightsource bp.

► Mike Deggendorf, SVP, Regulated Infrastructure Development, American Electric Power.

► Leigh Zanone, Senior Director, Operation and Asset Management, 8minute Solar Energy.

► Brad Purtell, VP, Services Business Development, Invenergy.

► Martin Mugica, President & CEO, Skyline Renewables.

“With U.S. wind and solar having just triumphed at another record, generating 20 percent of all U.S. electricity for the first time, we look forward to welcoming the community to Dallas this summer to tackle the growing pains of deploying and operating assets at scale, and facilitate the establishment of solar and wind as the backbone of U.S. energy generation,” said Leo Lam Reis, Project Director, Utility Scale Solar and Wind, Reuters Events.

MORE INFO events.reutersevents.com/renewable-energy

Interior Department announces Carolina Long Bay wind sale

The Department of the Interior recently announced the results of the Bureau of Ocean Energy Management’s (BOEM) offshore wind sale off the coast of North Carolina in the Carolina Long Bay area.

The lease sale offered two lease areas totaling 110,091 acres in the Caro-

lina Long Bay area about 20 miles off the coast of Bald Head Island, North Carolina. The two lease areas have the potential to support at least 1.3 GW of offshore wind — enough wind energy to power about 500,000 homes.

The results are a milestone toward achieving the Biden-Harris administration's goal of reaching 30 GW of offshore wind by 2030, and North Carolina's goal of reaching 2.8 GW of offshore wind by 2030.

The lease sale drew winning bids from two companies totaling about \$315 million.

According to The Special Initiative for Offshore Wind's 2021 Supply Chain Contracting Forecast, offshore wind is projected to create more than \$109 billion in economic output, with approximately \$90 billion of that output focused in the manufacturing supply chain.

"We are incredibly excited to work with Total Energies Renewables USA and Duke Energy Renewables Wind to bring offshore wind development to the Carolinas," said Southeastern Wind Coalition's Katharine Kollins. "The announcement of two provisional lease winners increases the opportunity for economic development to support the offshore wind industry in North Carolina and across the East Coast."

"Investments from two developers

means increased supply-chain investment and recruitment, workforce development and thousands of good-paying jobs, and infrastructure development that will support other North Carolina industries," Kollins said.

MORE INFO www.sewind.org

Study: Wind could power more than half of U.S.

The U.S. Department of Energy's (DOE) National Renewable Energy Laboratory recently released the Distributed Wind Energy Futures Study, which details the high potential to profitably deploy nearly 1,400 GW of distributed wind capacity across the United States. This equates to more than half of the nation's current annual electricity consumption.

"As this study illustrates, distributed wind energy could bring clean power to millions of American households," said Kelly Speakes-Backman, principal deputy assistant secretary for Energy Efficiency and Renewable Energy. "By realizing this potential, we can help local communities drive their own paths to a clean energy future and support national progress toward our climate goals."

Distributed wind energy is connected to local electricity distribution networks and can provide onsite energy to businesses, farms, homes, and other users. About 1.1 GW of distributed wind capacity is installed in the United States today.

The study identifies states in the nation's Midwest and Heartland regions as having the largest potential for distributed wind due to the combination of high wind speeds and sufficiently high retail electricity rates. The Pacific and Northeast regions also have significant potential for expansion of behind-the-meter distributed wind deployments, where the distributed wind system directly offsets a specific end-user's consumption of retail electricity supply.

There are also significant opportunities to expand distributed wind in disadvantaged communities, identified as census areas with a high risk for environmental hazards and/or areas that include high proportions of low-income households.

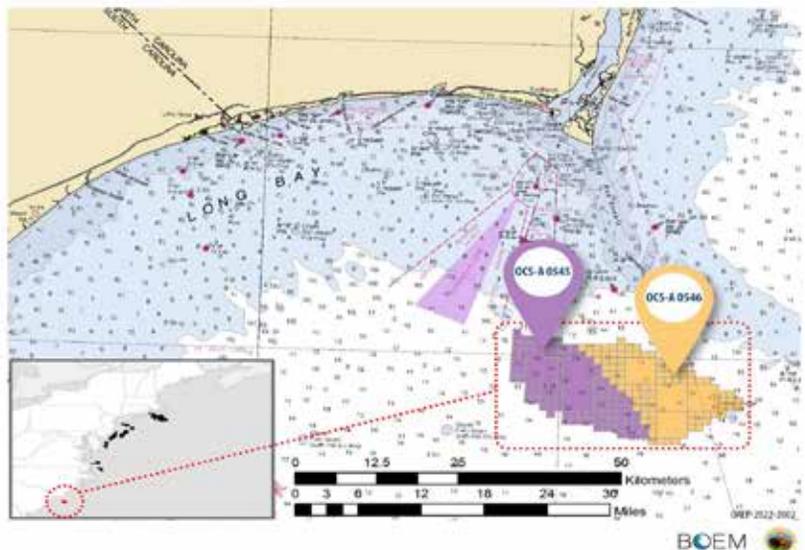
This is particularly true in the coming decade for behind-the-meter deployments in states such as Texas, Montana, Michigan, and New Mexico, potentially creating a means to reduce energy burden in these communities.

MORE INFO www.energy.gov

Provisional Winners of the CAROLINA LONG BAY Lease Areas, \$315M in High Bids

OCS-A 0545
TotalEnergies
Renewables USA, LLC
\$160M

OCS-A 0546
Duke Energy
Renewables Wind, LLC
\$155M



Two lease areas have the potential to support at least 1.3 GW of offshore wind. (Courtesy: Southeastern Wind Coalition)

Aerones startup raises \$9M for wind-turbine inspection robots

Aerones, a company that builds robots to automate and scale wind-turbine inspection and maintenance, raised a \$9 million seed round to scale production, expand services, and meet fast-growing demand.

With its suite of proprietary robots, Aerones inspects and maintains turbines up to six times faster and up to 40 percent more cost efficiently than humans.

Aerones' core technology is a patented computerized winch system that controls a high-precision robotic arm. The company provides services such as leading-edge repair, detailed external inspections, data analysis, lightning protection system tests, NDT ultrasound inspections, drainage hole cleaning as well as blade cleaning, de-icing, and coating applications – all of which can be controlled remotely.

As opposed to conventional inspections and maintenance operations (where humans rappel down turbines in sometimes dangerous weather conditions), Aerones' robots deliver results without any safety risks to individuals, and in a broader range of weather conditions.

“Aerones is the first full-stack player in the industry,” said Sofia Hmich, founder of Future Positive Capital, “as opposed to companies that merely use remote sensing to capture data or focus on analytics, Aerones automates complex operations. They are becoming the one-stop shop for O&Ms to streamline operations and help accelerate the scale-up of renewable energy to reach Net Zero emissions.”

Aerones already works with nine of the world's 10 largest wind companies, including Siemens Gamesa, Enel, GE, and Vestas, and has now serviced more than 3,000 wind turbines in 17 countries across North and South America as well as Europe. ✈

MORE INFO aerones.com



Aerones's CEO and co-founder Dainis Kruze (left) and co-founder and CTO Janis Putrams (right.) (Courtesy: Aerones)

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