

Utility builds nation's first large-scale wind, solar and battery facility

By **MONICA SAMAYOA**
Oregon Public Broadcasting

Nestled in the hills of Morrow County, hundreds of solar panels and wind turbines are generating a product that will soon be in high demand around the state — clean electric energy.

But storing large amounts of renewable energy has proven challenging. Wind and solar only generate power when the sun is shining or the wind is blowing. Otherwise, fossil fuels kick back in. Now, one major utility in Oregon is trying to produce energy 24/7 with a boost from a critical component — batteries.

Portland General Electric built a first-of-its-kind facility that will use an innovative battery technology supporters are calling a “game changer” for Oregon’s renewable energy transition. The batteries allow the Lexington facility to capture and store electricity even when there’s no sun or wind available.

“I think you’re going to see more of these types of facilities in the future,” said Kristen Sheeran, PGE’s director of sustainability strategy, on a recent tour. “We’re still in the early years of battery storage technology development.”

The Wheatridge Renewable Energy Facility is about 30 miles from the utility’s now shuttered Boardman coal plant and uses the same transmission lines. It started operating in March and generates 350 megawatts of clean energy — enough to power about 100,000 homes. The batteries store 30 megawatts, or enough to power Tigard for four hours.

Powering up

PGE’s push for clean energy is driven in large part by state House Bill 2021. It’s one of the nation’s most ambitious climate plans, and was signed into law in 2021 by Gov. Kate Brown. The

law requires utilities like PGE and Pacific Power to reduce carbon emissions by 100% by 2040.

Sheeran said battery storage will help them get there by improving reliability and creating storage that allows the facility to function 24/7.

“Sites like this are fitting into sort of a larger grid network of providing reliable, renewable power that utilities across the West are increasingly drawing on,” Sheeran said.

To develop Wheatridge, PGE partnered with NextEra Energy Resources, one of the world’s largest generators of wind and solar energy and a leader in integrated battery storage systems.

David Lawlor, NextEra’s director of development for the Pacific Northwest, said as bat-

tery technology advances, the facility will be able to handle more storage. Right now, there are 21 large and small battery containers at the facility.

“One of the great things about having battery storage integrated into the other two technologies, is it’s already engineered and built for augmentation,” he said. “So these containers can take more batteries and as the batteries become a little less efficient, we add more batteries to keep the capacity.”

Jana Lehn, NextEra’s PV Solar Field Technician, is one of the first technicians cross-trained in all three renewable technologies. She said her role at Wheatridge is to make sure the facility and batteries are working properly and train other technicians.

So far, only the solar panels generate enough energy to charge the batteries. Lehn said the energy collected by solar panels produces direct current or DC voltage similar to car or cell phone batteries. The DC voltage then goes to an inverter, or

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Energy produced by wind turbines and solar panels utilize the existing transmission lines from the former Boardman coal plant, top left.

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