

'Reliable, renewable,' historic

Oregon utility powers up nation's first large-scale wind, solar, battery facility

BY MONICA SAMAYOA

Oregon Public Broadcasting

MORROW COUNTY — 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, which also relies on power generated by hydroelectric dams, partnered with NextEra Energy Resources to build a first-of-its-kind facility that will use an innovative battery technology that 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, Portland General Electric'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 some of the same transmission lines. It started operating in March and generates up to 350 megawatts of clean energy — enough to power about 100,000 homes. The batteries store 30 megawatts, or enough to power the city of Tigard for four hours.

Powering up

PGE's push for clean energy is driven in large part by 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



Jana Lehn, NextEra's PV Solar Field Technician, is one of the first technicians cross-trained in all three renewable technologies. "From our inverter we can go out to the grid or we can go and charge our batteries," she said. "Then at night when we don't have any sun to produce power, we can push power from our batteries through our inverter out to the grid."

Kristyna Wentz-Graff/
Oregon Public Broadcasting

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.

David Lawlor is NextEra's director of development for the Pacific Northwest. NextEra one of the world's largest generators of wind and solar energy and a leader in integrated battery storage systems.

He said as battery 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," Lawlor 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 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 the central point of where all the power goes and changes into alternating current or AC voltage.

"It does its little magic, it turns it to AC voltage, which that's what our transmission lines carry," she said. "Your AC voltage is going to be the plug on your wall at your home."

This process helps the energy collected become "clean energy" and it, in turn, creates an easier flow to power homes.

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'You need flexibility'

Bob Jenks, executive director of the Oregon Citizens Utility Board, said the Wheatridge facility represents a step in the right direction for Oregon's clean electricity efforts. It also removes the dependence on only one source of clean energy.

"You need diversity of renewable resources," he said. "You need flexibility with them and the battery here is providing that flexibility."

Jenks said battery storage is becoming increasingly important in the clean energy transition, as utilities figure out ways to move power from one time of the day to another. Adding batteries to the mix will change when, where, and how clean energy is cre-



Kristyna Wentz-Graff/Oregon Public Broadcasting

Solar panels and wind turbines work to create clean electric power May 24, 2022, at Wheatridge Renewable Energy Facility in Morrow County. Portland General Electric partnered with NextEra Energy Resources to build a first-of-its-kind facility that will use an innovative battery technology that supporters are calling a "game changer" for Oregon's renewable energy transition.

ated and stored across the state.

"That comes in real valuable because solar stops producing in late afternoon, early evening — but that's when people get home from work and tend to turn on their air conditioning," Jenks said.

Jenks cautioned there could be some downsides to the technology, and questioned the ability of batteries to manage the power load and travel long distances. For example, he said PGE's decision to locate the batteries at the facility could mean that by the time the energy makes it to the Willamette Valley, some of its power has been lost.

He also said storage capacity can decline over time as the battery's life capacity depletes. Weather is another variable that can affect how batteries store energy.

"Anyone who owns an electric vehicle knows that in the winter you don't get the same amount of miles as you get in in the summer," he said. "Cold weather has negative effects on the ability to charge and maintain power."

But overall, Jenks said the facility is a smart investment and will likely be good for ratepayers.

"This is a good example of how the technologies are there," he said. "And in Oregon, there's the political will to require our utilities to use that technology."

'Tip of the iceberg'

Adam Schultz, the Oregon Department of Energy's electricity and mar-

kets policy group lead, said he expects more projects to follow Wheatridge's lead by combining different technologies like wind, solar, hydropower and batteries to generate and store more clean energy. But that is also going to prompt a change in the current power system grid.

"If you're going to try to generate enough clean megawatt hours to displace all the fossil fuels on the system, you're going to need to move those megawatt hours around to be available 24/7," he said. "This is sort of what we expect to see in the future."

Schultz said Oregon's electric system was built for transporting power when needed rather than collecting it. He said it doesn't take a lot of storage to begin to have an impact on the power grid, and facilities like Wheatridge will help other utilities think differently about storage and getting clean energy on the power grid.

Storage also can save ratepayers money during peak hours, Schultz said. Especially in the summer months when air conditioning units are running full blast.

"So that's sort of the game-changer of storage at a very broad scale," he said. "Sort of the tip of the iceberg there of what's coming."

As battery storage becomes more common, Schultz said it's hard to overstate the role it will have in the next 40 years and he expects states like Oregon will take a more streamlined approach to clean energy and share resources with other states.

Texas massacre spurs Oregon gun-safety ballot initiative

BY ANDREW SELSKY

Associated Press

SALEM — When Rae-vahna Richardson spotted a woman standing outside a library in Salem gathering signatures for a gun-safety initiative, she made a beeline and added her name.

"I signed it to keep our kids safe, because something needs to change. I have a kid that's going to be in first grade this upcoming season, and I don't want her to have to be scared at school," Richardson said.

"To keep our kids safe." It's something so many parents across the United States are worried about after the horrific massacre of 19 children and two teachers in Uvalde, Texas, last month. That mass shooting has given the Oregon ballot initiative huge momentum, with the number of volunteers doubling to 1,200 and signatures increasing exponentially, organizers said.



Getty Images/File

A group hopes to put an initiative on the November ballot in Oregon that would include limits on the capacity of certain gun magazines.

With the majority of state legislatures having taken no action on gun safety in recent years, or moving in the opposite direction, activists see voter-driven initiatives as a viable alternative.

"To get really strong action at this moment in time, it's going to take people in a democracy to exercise that democratic right to get on the ballot and get it voted for," said the

Rev. Mark Knutson, a chief petitioner of the Oregon initiative.

Oregon appears to be the only state in America with a gun safety initiative underway for the 2022 election, according to Sean Holihan, state legislative director for Giffords, an organization dedicated to saving lives from gun violence.

If the initiative gets on the ballot and it passes, anyone

wanting to acquire a firearm would first have to get a permit, valid for five years, from local law enforcement after completing safety training, passing a criminal background check and meeting other requirements. The measure would ban ammunition magazines over 10 rounds, except for current owners, law enforcement and the military, and the state police would create a firearms database.

The age range of those gathering signatures from registered voters runs from middle-schoolers to a 94-year-old, Knutson said. Volunteers are ensconced in a room at Augustana Lutheran Church in Portland, sorting through baskets of envelopes containing mailed-in signatures.

The National Rifle Association's Institute for Legislative Action has already come out strongly against the initiative, saying on its website that "these

anti-gun citizens are coming after YOU, the law-abiding firearm owners of Oregon, and YOUR guns. They don't care about the Constitution, your right to keep and bear arms, or your God-given right of self-defense."

Knutson says the effort in Oregon "can start to build hope across the nation for others to do the same."

Voters in two predominantly Democratic neighboring states have already passed gun safety ballot measures.

In 2018, Washington state voters approved restrictions on the purchase and ownership of firearms, including raising the minimum purchasing age to 21, adding background checks and increasing waiting periods. In 2016, voters there overwhelmingly approved a measure authorizing courts to issue extreme risk protection orders to remove an individual's access to firearms.

California voters in 2016 passed a measure prohibiting the possession of large-capacity ammunition magazines and requiring certain individuals to pass a background check to buy ammunition.

The same year, voters in Maine narrowly defeated a proposal to require background checks before a gun sale.

Daniel Webster, co-director of the Center for Gun Violence Solutions at Johns Hopkins University, said ballot initiatives "are a great way to advance gun policies that are popular."

"But I honestly don't know how much one state's ballot initiative affects the likelihood of other states taking action," he added.

The Oregon initiative needs to deliver at least 112,080 registered voters' signatures — verified by the secretary of state's office — by July 8 to get on the ballot, Knutson said.

Fireworks

Continued from A1

Registration starts at 7 a.m. in the Haines park for the 5K/10K fun run and walk, which is a fundraiser for the Baker High School track program.

The Haines Mutual Improvement Club will have a pie sale starting at 9 a.m. at City Hall, 891 Front St. Pro-

ceeds benefit the Haines Elementary School.

Steffi Carter will sing the national anthem just before the parade, which starts at 10 a.m.

Rowe said organizers are requesting that there be no political entries in the parade.

"Kind of forget the rest of the world and celebrate America," she said.

The Spec. Mabry James An-

ders Memorial Fund barbecue will start at 11 a.m. and the Haines Art Festival will run from 9 a.m. to 3 p.m. in the park.

Barefoot & Bonafide will perform in the park at 11 a.m.

The Baker County Sheriff's Office will serve free scones in the park.

Rowe said organizers have also introduced the "water zone" at the end of the parade

on the park side at the end of Front Street.

"If you want to get wet, you need to be in that water zone," Rowe said. "And they can bring water guns too to fire back at the Fire Department."

Rowe said they didn't want the spectators and the little

kids running out to the parade to get wet. They decided to have a water zone at the end rather than risk having kids run in the street.

Fireworks will start at 10 p.m.

Rowe said organizers always need donations to help pay for

the fireworks show.

This year's show cost \$2,000 more than last year, without adding more fireworks, she said.

The Haines Stampede Rodeo runs both July 3, starting at 5 p.m., and July 4, starting at 1:30 p.m.

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