Solar: 'You may start seeing clusters of solar facilities'

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able portfolio mandates and other government incentives, the solar power industry has now found its financial footing and is expanding due to demand from utility companies, experts say.

"The market is driving the boom," said Mark Zwieg, Hecate Energy's development manager in charge of the Bonanza project and other proposals. "Our cost of materials is going down every year."

A lower cost of construction is also spurring the growth, he said. "There's more firms constructing, so there's more competition, and competition drives costs down."

A megawatt of solar power capacity requires about 5 to 10 acres and costs about $780,000 to $910,000 to install at the utility scale, depending on the technology.

The Bonanza project alone is projected to increase Oregon's solar capacity by 150-300 megawatts, depending on the configuration of the final design.

Though installation has grown cheaper, siting remains a challenging aspect of the solar development process. Projects require suitable land that's close enough to transmission lines and substations to make economic sense.

"You may start seeing clusters of solar facilities in one area because of those attributes," Zwieg said.

Resistance from surrounding landowners is a less tangible but very real impediment to developing a solar facility.

Hecate Energy is still conducting its due diligence on the Bonanza site, which was chosen partly because a natural gas facility was approved there by Oregon's Energy Facility Siting Council nearly 20 years ago.

The many objections to the project — including the loss of irrigated land, wildlife habitat and cultural heritage — will be worked through as the company discusses the details with stakeholders, Zwieg said.

"We want to be good neighbors. We want to minimize our impacts," he said. "You don't want to look at all the projects the same. Your approach to opposition needs to evolve with each project."

Mateusz Perkowski/Capital Press

The Woodline Solar Project, developed by Pine Gate Renewables, is a solar facility that's already been constructed in Oregon's Klamath County. Suitable conditions can encourage clusters of such projects, experts say.

Mateusz Perkowski/Capital Press

Alyssa Andrew, an Oregon State University graduate student, visits with sheep resting beneath solar panels at a campus facility in Corvallis, Ore.

Mateusz Perkowski/Capital Press

Donnie Boyd, a Klamath County commissioner, is opposed to a proposed 2,700-acre solar facility near Bonanza, Ore. Boyd said the state-level Energy Facility Siting Council takes away local control over such projects.

'Really big problem'

Even so, the controversies repeatedly encountered by solar projects in Oregon have taken a toll on the industry, experts say.

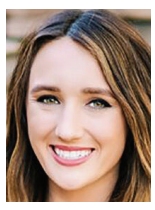
"Anecdotally, we're hearing from developers that it's a really big problem," said Max Greene, regulatory and policy director for the Renewable Northwest nonprofit, which advocates for solar, wind and geothermal projects.

Unless Oregon comes up with a way to make the public more comfortable with solar projects, it will be difficult or even impossible to build new facilities in the state, he said.

"I don't think we're there yet. We're at this flashpoint," he said. "It's a sign we need to do something to get people together and figure this out."

Battles over large-scale facilities occur before the EFSC, whose decisions can be appealed directly to the state's Supreme Court.

Smaller projects approved by county governments are challenged before the state's Land Use Board of Appeals, whose decisions are reviewed by the Oregon Court of Appeals.



Samantha Bayer

Bills governing solar siting are also regularly debated in the Legislature, which recently gave county governments increased jurisdiction over such projects.

Farmland preservation groups prefer the EFSC siting process because they're afraid county governments aren't equipped to thoroughly analyze solar facilities.

However, the EFSC process also has critics, such as Donnie Boyd, a Klamath County commissioner opposed to the Bonanza project.

"If the project is a certain size, they can go around the county and do whatever they want," he said. "The EFSC process takes out the local input. I don't think the state government should be able to dictate to local citizens how they want their area."

Key rule

One of the more significant changes affecting solar development has occurred on the regulatory front: A 2019 rule from the state's Department of Land Conservation and Development effectively prohibited solar facilities on the two highest classes of soil.

The impact has particularly been felt in Western Oregon, where solar development has largely ground to a halt since the rule was enacted, said Angela Crowley-Koch, executive director of the Oregon Solar and Storage Industries Association.

"Most people feel like the Willamette Valley is off the table right now," she said.

While the area is notoriously soggy and cloudy, it still receives enough ultraviolet light to allow for productive solar facilities, Crowley-Koch said. Critically, the west side is also where most of the state's power demand is.

"The decision was really using an ax when you should have used a scalpel," she said. "The DLCD ruling didn't allow for any nuance."

Advocates of farmland preservation see the rule change as a victory. The regulation came after the Oregon Farm Bureau, 1,000 Friends of Oregon and local nonprofits raised an alarm about the proliferation of solar proposals on farmland.

In the experience of the farmland preservation nonprofit Friends of Yamhill County, most farmers in the area have received solicitations from solar developers, said Kathryn Jernstedt, the organization's president. "We're constantly fighting the misconception that agricultural land is vacant land. It's not."

Friends of Yamhill County isn't opposed to renewable energy but doesn't consider solar panels to be the best use of high-value farmland, since they don't depend on high-quality soil or provide the same "economic multipliers" as agriculture, she said.

Though solar developments can provide income for farmers, that doesn't justify building them on valuable soils, she said. "Running a hotel on farmland would diversify their income but it's not an appropriate use of high-value farmland."

Landowners are paid from $300 to $2,000 per acre annually — depending on the project's size, location and other variables — for solar facilities installed on their properties. Contracts are usually for about 20 years and cover the productive lifespan of the project.

The siting process

The solar industry didn't do a good job explaining the siting process, which gave rise to worries that new projects were mushrooming across the landscape, said Crowley-Koch of OSSIA.

"It must have felt like if you live in the area, farmland is disappearing and solar is appearing everywhere," she said.

In reality, developers lease multiple properties before deciding which parcel is appropriate for development, Crowley-Koch said. "It's an investment to even think about having a solar project."

While not every solicitation letter would have resulted in a solar project, such facilities do represent a major form of development on farmland.

Solar projects are among the most commonly approved non-residential uses in farm and forest zones, according to the state DLCD.

At 966 megawatts, solar capacity in Oregon grew by more than 30% in 2020 alone, according to the Solar Energy Industries Association. The industry is expected to expand by 1,646 megawatts during the next five years.

A megawatt is enough to power about 190 homes for a year, according to the association.

"Solar energy development is rapidly growing in Oregon," DLCD said. "Many utility scale solar facilities are opting to locate on land zoned (exclusive farm use) due to proximity to high-voltage powerlines and substations with interconnection opportunities, lower land acquisition or lease costs, availability of unobstructed sunlight, and ease of development due to flatter slopes."

Up to 75,000 acres in Oregon could be converted to solar facilities in the next 30 years, according to the American Farmland Trust.

"I think you're going to have local communities pushing back or at least having a say in how those projects are developed," said Addie Candib, the group's Pacific Northwest regional director.

The farmland preservation group 1,000 Friends of Oregon would prefer that solar facilities be steered toward industrial areas, similar to the way residential subdivisions are constructed within "urban growth boundaries."

"It's not occurring because just like every other industry, it's perceived as cheaper to develop farmland rather than be creative and innovative with land that's already been developed," said Jasmine Zimmer-Stucky, the nonprofit's working lands engagement manager.

Statewide inventory

The Oregon Farm Bureau believes a statewide inventory or map of lands available for solar development could expedite those projects that are broadly beneficial, said Samantha Bayer, the organization's policy counsel.

"We need to establish more certainty on the front end of where these projects should go," she said. "There is a place for solar in the system. It just seems like a lot of the places that are cheapest for solar projects are on valuable agricultural land."

Representatives of the solar industry say that local governments prefer industrial areas to be dedicated to facilities that generate more permanent jobs than solar projects. Mapping, meanwhile, may not recognize the complexities of siting solar arrays on specific properties.

Co-locating new solar facilities with continued agricultural uses — known as agrivoltaics — offers one possibility for compromise.

Chad Higgins, an associate professor at Oregon State University, began studying the subject after noticing some sheep congregating under solar panels at a campus installation.

His research has determined that grass below the panels grows slower but reaches dormancy later in the season, consuming less water while extending the pasture's productivity in summer.

The growth rate of sheep isn't reduced if they graze beneath the panels, which they preferred to do because of the shade.

Sheep raised in open pasture will actually gaze longingly at their companions beneath solar panels and try to get past a fence to join them, said Alyssa Andrew, an OSU graduate student involved in the research.

"They seem to like it a lot," she said. "They're under there pretty much every time I'm here."

Higgins is now comparing several agrivoltaic arrangements at another site, though he acknowledges the co-location strategy may face obstacles and limitations.

"Any grower who looks at an array, their first question is: How do I get a tractor in there?" he said.

Farmland preservationists say the idea is worth exploring, though they're concerned that solar panels may permanently hinder the types of crops and equipment a property can support.

Some concepts, such as placing beehives in fields with solar facilities, have raised suspicions whether the agricultural use may simply provide a fig leaf for development.

Preventing agrivoltaics from creating such a regulatory loophole is a matter that must be decided by policy makers, Higgins said.

Wolves: Minnesota rancher says he lost 26 calves to wolves one year

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administration) do their thinking," she said.

Wolves already were delisted in Idaho and the eastern one-third of Washington and Oregon and were not affected by the November rule.

Environmental groups argue the Trump administration prematurely lifted federal protection for wolves elsewhere. Wolves have not recolonized their historic range, the suits claim.

The environmental groups say their members interact with wolves for recreational, spiritual, aesthetic and scientific benefits.

A Humane Society of the United States member in Minnesota declared in a court filing she has "formed relationships with individual wolves whose unique howls and behaviors she has come to know."

Hunters and farmers also say they are personally affected by wolves and that they would rather have states and tribes manage the predators, rather than the Endangered Species Act.

Getty Images

Wolves were delisted in Idaho and the eastern one-third of Washington and Oregon and were not affected by the November rule.

A Wisconsin taxidermist declared he wanted to hunt wolves to maintain the deer population and "reduce conflicts between humans and wolves."

A Minnesota rancher declared he lost 26 calves to wolves one year. "Waking up in the morning, I often wonder how many cattle are dead or missing to gray wolf depredation. It has been a nightmare."

The lead plaintiffs in the three lawsuits are Defenders of Wildlife, WildEarth Guardians and the Natural Resources Defense Council.

Fire: Outlook calsl for warmer, drier than average conditions

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Central Oregon and southeastern Washington likely will have above-normal potential for large fires starting in June. An increase to above-normal risk is expected in June and July in parts of the Coast, Sierra and California Cascade mountain ranges.

National Oceanic and Atmospheric Administration Climate Prediction Center outlooks call for conditions that are warmer and drier than average in June in Oregon and Washington, except for equal chances of dry, normal or wet conditions from the Olympic Peninsula through western Oregon, NIFC said.

Forecasters expect above-normal potential of significant fires in the Southwest through June before the monsoon arrives. Above-normal risk is expected to expand north and east, into the Great Basin and Rocky Mountain region, through August.

NIFC pegged the risk of significant wildfires at above normal in most middle and upper-elevation areas of central Northern California from June through August. Above-normal risk is expected in September, except in parts of the state's northeastern area.

Elevated risk in much of Southern California is likely for July through September. NIFC said drought continued to worsen in May, and much of the area is under severe to extreme drought. Dead fuels are especially dry.

Low snowpack and "significant long-term exceptional drought" at middle and higher elevations of the eastern Great Basin mean significant wildfire potential is expected to increase through August in that area from south to north, the report said.

In the Northern Rockies, above-normal risk of large fires is expected in July west of the Continental Divide — where drought is developing following a dry spring in northern Idaho and northwestern Montana — and in August region-wide.