

Wind energy projects pose conflicts

Rural areas weigh impacts

By **SIERRA DAWN McCLAIN**
Capital Press

MORO — In Sherman County, every family gets a gift at Christmastime.

In this sparsely populated stretch of Oregon where unremitting winds swirl across wheat fields, wind power has stamped its insignia.

Hundreds of wind turbines tower over the land, whirring as they generate electricity — and money. Wshh. Wshh. Wshh. Each December, households receive checks for \$590 in exchange for use of their county as a wind site.

Developers pay the bulk of the money to farmers whose land they lease. A landowner typically gets \$8,000 per megawatt per year, and the average turbine's capacity is 2.5 to 3 megawatts. The county also invests its share of the revenue in infrastructure. Court records show Sherman County — once the second-poorest county in Oregon — has raked in tens of millions of dollars since the first turbines were erected in 2002.

"Wind turbines. What can I say?" said Sherman County Judge Joe Dabulskis, the top elected official. "Whether you're for them or against them, they have made a difference."

Some rural communities love wind power. Some hate it. Like it or not, the production of wind energy is expanding in the rural West with new, more efficient technology. At the same time, developers pushing to build turbines at new sites across the region are stirring a brew of new and age-old conflicts: bird and bat mortalities, push-back from rural communities that resist change and obstacles created by the limited power grid infrastructure.

For years, wind was dismissed as a fickle power source that could never meet a significant portion of the nation's energy needs. New technologies and falling costs, however, are changing the industry.

According to the American Wind Energy Association, since 2009, the cost of wind energy has plunged 69%, making it the most affordable power source in much of the U.S. According to the U.S. Department of Energy, the installation cost for a commercial-scale wind turbine today is \$3 million to \$4 million. The industry, which for decades relied on tax incentives, is being weaned off subsidies, said Janine Benner, director of the Oregon Department of Energy.

Most U.S. wind turbines are manufactured in the U.S. Benner said Oregon has eight manufacturers. Vestas, the world's largest wind turbine manufacturer, is based in Portland.

New turbines, Benner said, are more efficient. Blades are longer. Rotors are better. And they are taller. One of the newest models stands at 650 feet — taller than Seattle's Space Needle.

But bigger turbines mean more controversy.

The birds and the bats

Birds and bats have a fraught history with wind turbines, but new technologies are making it easier for winged creatures and wind power to coexist.

The wind-bird controversy dates to the 1990s, when conservationists found thousands of bats and birds annually — including protected species such as golden eagles — dying or being mutilated at California's Altamont Pass wind farm.

Bat mortalities are often harder to quantify, said Todd Katzner, a research wildlife biologist with the U.S. Geo-



Sierra Dawn McClain/Capital Press

Construction site manager Colton Wilson at a wind turbine.

logical Survey. Because bats are tiny, their remains often vanish.

Industry advocates say mortalities from turbines are scant compared to millions of annual bird deaths caused by cats, power lines, vehicles or crashes into windows.

Katzner calls this an unfair comparison.

"It matters what species you kill," said Katzner. "Songbirds probably crash into every house in North America. You never hear of a golden eagle killing itself by crashing into a window, but

eagles do die from turbine blades. If you killed a million chipping sparrows, it would affect only 1% of the population. If you killed 100,000 golden eagles, you'd wipe out the entire U.S. golden eagle population twice."

Researchers are pushing for laws and practices that kill fewer birds. One solution is choosing sites for wind farms away from migratory flyways. But siting is challenging.

In the West each year, more than a billion birds follow the Pacific Flyway —

a migration path stretching from Arctic tundra to tropical rainforest.

However, said Garry George, the National Audubon Society's renewable energy director, tracking birds in the western U.S. is difficult because migration pathways change based on rainfall and plants.

Face-recognition technology isn't just for smartphones and Facebook. Scientists use similar artificial intelligence-based technologies, such as IdentiFlight, to train machines to recognize and track bird species.

Kevin Martin, director of environmental permitting at Terra-Gen Power, devised a GPS tracking system for protecting endangered California condors from death-by-turbine.

Energy companies pay for and operate these technologies because it's expected and, sometimes, required. But developers have more to worry about than wildlife. They must also please landowners.

Farming wind turbines

Threemile Canyon Farms — which encompasses 93,000 acres near Boardman — is near the Columbia Gorge.

The hills along the gorge buckle together like a great patchwork quilt of gold, brown and green draped over the earth. Trees grow bent from the gusts that tear across the plateau. A wind developer's dream.

In 2007, Marty Myers, general manager of Threemile Canyon Farms, accepted an offer from then-developer John Deere Renewables to erect six wind turbines on the farm's land.

For Myers, the turbines are a low-maintenance source of added income. The developer is responsible for maintenance and bird monitoring. Myers grows organic crops

on that portion of the farm, leaving uncultivated a 1-acre patch under each turbine.

"It's good business for a farmer," he said. "No matter what happens in the ag market, it's a source of stability."

Myers said he wanted more turbines but was prevented because the farm lies too close to the Boardman Bombing Range, where turbines could interfere with low-flying planes.

"These turbines are fascinating things," said Myers. "When night comes and the red lights of the turbines flash across the fields, it's like something from outer space."

He gestured west, toward the violet hills and Shepherd Flats, the neighboring wind farm.

"I wish those ones were mine, too," he said.

Not everyone in Boardman, however, is happy with the energy industry.

More wind power means more transmission lines, which concerns rural people.

Todd Cornett is secretary for the state Energy Facility Siting Council, a governor-appointed council responsible for ensuring that energy sites are chosen responsibly. According to him, even if turbines generate enough power, it's useless if it can't be moved to where it's needed and when it's needed. An expanded grid is essential — more high-tension power lines.

There's the roadblock.

The U.S. uses 21st-century technology to produce energy, but still uses 20th-century infrastructure that can't efficiently move energy from windy rural locations to urban markets. America's power grid is like the nation's roads before President Dwight Eisenhower's interstate highway system. Cornett said that however much wind developers want to expand, they will be limited by access to transmission lines and substations.

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