

# FFA puts hold on big Shepard Flats wind project

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canceled. Oregon Sens. Ron Wyden and Jeff Merkley are assisting Caithness Energy in trying to resolve the issues and permit the project to continue.

"If the Defense Department allows this project to go down the drain after years and years of development, the (wind farm) investors are going to walk," Wyden said. "We don't see why they should be able to come in at the last minute and put the kibosh on this program."

Gelber claims that the Air Force and Navy were notified of the project years ago and never raised any concerns. He asserts that Caithness has invested four to five years in obtaining proper permits from federal and local authorities to enable construction of the 845 megawatt capacity farm. Now, after signing a \$1.4 billion agreement with General Electric, workers are arriving for construction on roads and turbine foundations, however, Caithness cannot put them to work. They may be prevented from ever completing their venture. The Air Force's concern stems from two factors. Turbines can reflect radar and create blind spots that erase airplanes from the radar screen. Additionally, the varying speeds in turbines due to changes in wind clutter the radar screen.

According to the FAA notice, the proposed turbines could "seriously impair the ability of the (Department of Defense) to detect, monitor and safely conduct air operations in this region." The AA further states that the Fossil radar station "already experiences significant clutter and target tracking issues in this general area."

The project involves 303 wind turbines and the power sales will go to Southern California Edison.

When completed, Shepherds, located on approximately 32,000 acres, will be the largest wind facility in Oregon.

## Fears of Radar Interference Threaten Oregon Wind Farm, but Solutions Exist

Software and Hardware Upgrades Can Eliminate the Problems

by Dave Levitan - Apr 19th, 2010 from www.solveclimate.com

Wind turbines can reach hundreds of feet into the air, but the effects of their spinning blades can extend much farther than that.

In a rehashing of a continuing concern, the Pentagon and the Federal Aviation Administration are threatening to block the construction of what would be the country's largest wind farm because of a potential for the turbines to interfere with nearby radar systems' ability to track airplanes.

Caithness Energy is ready to start construction on the Shepherds Flat wind farm along the Columbia River Gorge in northeastern Oregon; it would have a capacity of up 909 megawatts. In spite of the project having been in development for several years, objections have been raised only now regarding a radar system used by the Air Force in Fossil, Ore., about 70 miles from the wind farm site.

At the root of the problem is the radar signature created by a spinning turbine blade. Radar systems are designed to distinguish between things that move and things that don't — say, an airplane versus the mountain behind it — so when an airplane flies in the same general vicinity as the many spinning blades on a wind farm, the airplane might disappear in the "clutter" created by the turbines' radar signature.

"Because this is an older radar it doesn't have a modern computer system to help it filter these things out," said Gary Seifert, an expert on wind turbines and radar at the Idaho National Laboratory.

"The older radars can only handle so much of that clutter or noise before they start detuning their performance. So if you get too many wind turbines in an area then that portion of the radar has a little less sensitivity."

### Multiple Mitigation Strategies

The conflict between wind turbines and radar is not a new one. The Sierra Club filed a lawsuit in 2006 arguing that the holds on wind farms due to military radar concerns were in effect halting the entire industry, and speaking at a conference earlier this year Seifert cited American Wind Energy Association data indicating that more than 9,000 MW of wind power have been held up, deferred or abandoned due to radar issues.

There is little debate that wind turbines can in fact interfere with radar's ability to see planes. The real question, Seifert told SolveClimate, is whether small gaps in a radar's vision are really all that important.

"If the plane is flying along, and you see him for 50 miles, and he disappears for a couple of miles and then is back on the screen again, did you lose your ability to do your job if that area is out in the middle of the desert and its not by anything that matters?"

He added that location is obviously quite important — if the turbines in question are next to a military base, or the border of the country, for example, "then the equation is completely different than if you're out in the middle of Oregon. Those are questions that only the military can answer."

And even if the answers to those questions are unequivocal and the military needs no gaps at all in its radar systems, solutions to the problem are plentiful.

First, newer radar systems, such as the Lockheed Martin TPS-77 recently purchased by the wind-friendly British government, have the ability to see through the turbine clutter.

"It can look for airplanes right down to about 500 feet of turbines without any interference from the turbines," Seifert said. He added, though, that price tags on the order of \$20 to \$30 million make this an unlikely mitigation option for the issues in Oregon.

Other, much cheaper fixes also are available though. There are software upgrades using what are known as clutter erasure algorithms that could help the older systems see through the turbines, and the FAA also can use the Service Life Extension Program to fund hardware upgrades that would eliminate the problem. Also, short range radar systems placed inside or directly adjacent to the wind farm could work in tandem with the long range system and fill in the gaps.

"The other thing to realize is that a cooperative airplane, when it is flying through airspace, uses a transponder that also interacts with the radar tracking system of the FAA," Seifert said. "When you have the transponder turned on, the radar has no trouble over the wind farms. It is only the airplanes that are 'non-cooperative,' which means they don't have a transponder, those are the only ones that are hard to find over some of these wind farms."

"Which gets back to the question: What is the mission, what is the worry, what is the threat? Is this an area we're worried about or is this just another area

where we're watching airplanes fly?"

### Elsewhere in the Gorge

The Shepherds Flat wind farm is the only one in the windy Columbia River Gorge area that has been asked to halt construction as of yet, but other developers are worried that the radar problems will reach them, as well. Jan Johnson, a spokesperson with Iberdrola Renewables, said the company has three projects totaling 400 MW in the eastern Columbia River Gorge area in Oregon and Washington that are currently awaiting final approval from the FAA.

Since getting initial findings of "no hazard" in relation to radar systems, the company has made some modifications to the wind farm plans, Johnson said, but the changes should not be enough to spur any sort of change in the FAA's finding.

"There is no reason, we believe, to delay or reject those facilities today for which no concerns were raised in the recent past," she said. "We are preparing to begin construction, which we cannot do without that approval." The company does expect to be able to move forward on construction soon.

Johnson also said that in the past when radar concerns have been raised in other areas of the country, the company has received some help from members of Congress who were hopeful that the wind projects could bring jobs to the area. In the case of the Shepherd's Flat project by Caithness Energy, the politicians are already chiming in.

Last week, Oregon's two senators, Democrats Ron Wyden and Jeff Merkley, placed holds on three defense department nominees as a negotiating tactic for speeding the resolution of the radar concerns. Caithness has said that any significant delay would scuttle the project completely, as federal stimulus funds will only go to the project if it is completed by the end of 2012.

Although the congressional input may help resolve this particular radar-wind power conflict, it is unlikely that this issue will go away any time soon.

"There are very few places in the US that will not receive more and more scrutiny as time goes on," Seifert said. "We have an awful lot of long range radar scattered around the US, and any radar that can see a turbine has this potential conflict. It just happens that some radars are very good at working with turbine clutter and other ones aren't quite so good." He said some concerns have already been raised around wind farms near the Great lakes, as well as in potential offshore sites along the east coast.

"Every situation, every radar has different distance issues, different performance issues," Seifert said. "Every risk or national security concern is going to be different, so that forces a case by case assessment."

## Sheriff's Report

The Morrow County Sheriff's Office reports handling the following business: was transporting one to the Tri-Cities.

-MCSO received report of a white terrier running around in Irrigon. The owner was contacted and advised to keep the dogs and her property or she would be cited.

-MCSO received report of a red Chevy Blazer being driven erratically on I-84, Boardman.

MCSO received report from a Heppner man that an unwanted male subject was at his home and wouldn't leave. A MCSO sergeant responded and took the subject home

-Boardman Police Department received report of a two-vehicle auto accident with no injuries. Insurance information was exchanged.

-BPD made contact with a citizen concerning sex offender registration.

-Irrigon Ambulance received report of a 79-year-old subject with COPD having difficulty breathing.

-BPD received report that a male subject was bitten by a dog and the bite broke the skin. -Boardman Ambulance received report of a male having seizures and vomiting. He was trans-

ported to Good Shepherd Hospital.

**December 29:** Morrow County Sheriff's Office received report of two male subjects leaving Green Street going onto second, both dressed in hoodies.

-MCSO received report of a semi on I-84 with flashers on. The brakes froze up and the maintenance truck was on the way.

-MCSO received report from the volunteer patrol at the McCormack Slough who said one or two hunters were there on a no-hunt day and have also driven off-road illegally. They requested a deputy to assist in locating and citing them.

-MCSO received request for someone to talk about the feral cat problem in Ione.

-MCSO received report that someone ran into a vehicle parked in the complainant's driveway in Heppner.

-MCSO received report of a car in Ione that was mostly in the road and creating a traffic hazard. The subject moved the vehicle.

-MCSO received report from a Heppner woman that her dogs got out and she had been trying to find them for the past hour, but had to go to work. The deputy said if he found them he would hold on to them. The neighbors found the dogs.

-MCSO received report from an Irrigon subject that her husband had been getting mail that was addressed to someone else, but it has he husband's Social Security Number and their gas card number. She requested a deputy to make contact with her.

-MCSO received report of a cow out on the tracks in Boardman. A deputy was unable to locate the animal.

-MCSO received report of a fuel tank speeding on the freeway.

-MCSO received report of a dog complaint. MCSO cited Portia Charlene Earnest, 56, for Maintaining a Dog as a Public Nuisance.

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## Sheriff's Report

The Morrow County Sheriff's Office reports handling the following business:

-MCSO received report of someone making harassing phone calls to a Boardman subject. The man was warned to stop calling or he would face telephone harassment charges.

-MCSO arrested Kelly Ray Fox, 36, for Failure to Pay Fine/Providing False Information to a Peace Officer while he was in the Umatilla County Jail on other charges.

-MCSO received report of a slide-off on I-84 with minor damages.

-MCSO, Boardman Fire Department, Boardman Ambulance received report of a rollover motor vehicle accident with the vehicle blocking the slow lane on I-84. The ambulance was refused. A tow was dispatched.

-MCSO received report that Heppner EMS

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