



The Oregonian

- **Part 1:** Oregon gets nation's first big highway solar project
- **Part 2:** Home solar energy systems in Oregon become more cost-efficient

Understanding solar

Oregon gets nation's first big highway solar project

The I-5/I-205 interchange in Tualatin is financed mostly with tax credits

Friday, August 08, 2008

DYLAN RIVERA

The Oregonian Staff



Related Documents (PDF):

1 | 2

In an attempt to spur the spread of solar power, the Oregon Department of Transportation on Thursday unveiled the nation's first solar panel project on a major U.S. highway.

At the interchange of Interstate 5 and Interstate 205 near Tualatin, a row of solar panels about 5 feet wide and two football fields long will start generating electricity by the end of the year.

The panels will feed electricity directly to PGE's systemwide grid and account for 28 percent of the energy needed to power lights that illuminate the highway's sweeping interchange at night.

Oregon's deal with Portland General Electric will give the utility its first ownership stake in a solar project and generate business for two new Oregon solar manufacturers. SolarWorld, a German company with operations in Hillsboro, will supply solar panels; and PV Powered, of Bend, will provide an inverter, an essential device.

"These are the kinds of economic opportunities that we are creating for all of Oregon as a result of our commitment to an energy-independent Oregon," Gov. Ted Kulongoski said in a news conference at the site on Thursday.

Ordinarily, such green power would come with a cost premium. But ODOT will pay standard commercial energy rates by using state and federal tax credits.

The project will generate less than 1 percent of the transportation department's annual energy use. But it represents a critical first step in what the department envisions as widespread use of solar energy.

Early next year, the department will seek proposals for similar highway projects generating 2 million kilowatt hours annually -- an amount that could feed 182 homes, or about 4.5 percent of ODOT's annual energy use. Officials also will seek proposals showing new technologies -- perhaps solar panels that double as sound walls reducing highway noise near residential neighborhoods. They're also

interested in possibly attaching panels to buildings and sound-deadening walls.

"Now you're starting to get some good numbers that may attract people who are willing to invest in the next big thing," said Lynn Frank, a consultant with Five Stars International Ltd. of Salem who helped with the I-5/I-205 project.

Some hurdles remain, however. Public Utility Commission rules prohibit solar panel owners from selling more power to the grid than they consume on-site in a year. That would keep ODOT from using solar in sunny areas to power lights in shady stretches of highway.

The Tualatin solar installation started Thursday would not have been possible without federal and state tax credits that give companies breaks for building solar projects. Transportation officials said they rushed to reach an agreement that could be complete by Dec. 31, when a 30 percent federal tax credit is set to expire.

Public agencies such as ODOT and nonprofits don't pay taxes, so they have no use themselves for a tax credit. But they sell the credits to private companies, in this case U.S. Bank, which will pay for much of the I-5/I-205 installation and take the tax credit for five years.

The Oregon Business Energy Tax Credit covers 50 percent of the cost. A federal tax credit covers 30 percent and offers accelerated depreciation for the solar panel owners. The Energy Trust of Oregon will provide a grant of \$175,000, from a fund paid by Oregon electric utility customers.

First for PGE

The project marks a first for PGE, Oregon's largest utility.

PGE intends to eventually own the array, adding solar power to a renewable energy portfolio so far dominated by wind energy. Until now, electricity from solar arrays in PGE territory has moved through the utility's power lines, but the projects have been owned and operated by others.

Under a newly formed company called SunWay 1, PGE, as managing partner and minority owner, will kick in a small part of the financing -- \$100,000. Majority owner and tax equity investor U.S. Bank will kick in the rest. Then, in five years when U.S. Bank uses up its tax credits, PGE will buy out its partner.

"For PGE the benefit is a long-term cost-effective resource we otherwise couldn't afford," said Mark Osborn, distributed resources manager.

Allison Hamilton, a project director with ODOT, dreamed up the idea about a year and a half ago. The PBS show "Nova" showed solar panels next to the autobahn highways in Germany.

"Why not do that here?" she wondered.

Hamilton, who works in ODOT's Office of Innovative Partnerships and Alternative Funding, said highway officials encouraged her to pursue the idea.

There's just one condition, they said: It can't cost the department anything more than it already spends.

With the help of Frank, the consultant, Hamilton said she learned about the tax credits available for such projects. Pacific Power, the other large utility in Oregon, wasn't interested.

They were able to structure a deal that will allow ODOT to pay standard commercial grid rates while buying renewable energy -- like champagne for the price of a beer.

"We will replicate this in spades, and we'll get lower cost per kilowatt," Hamilton said.

Gail Hill of The Oregonian staff contributed to this report. Dylan Rivera: 503-221-8532; dylanrivera@news.oregonian.com For environment news, go to: oregonlive.com/environment.

©2008 Oregonian