



FORTUNE

Oregon Solar Plants Power Up, Utilities Prepare to Power Them

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It's been a pro-solar week in **Oregon**. German solar maker SolarWorld is [set to open its 480,000-square-foot semiconductor plant in Hillsboro](#) today, and **Sanyo** [broke ground](#) at its 861,000-square-foot factory on Wednesday at the Salem (Ore.) Renewable Energy and Technology Park. [As we've written before](#), solar manufacturers are moving into **Oregon** at a brisk pace, thanks in part to the state's successful Business Energy Tax Credit. But while the new solar facilities may boost clean energy around the world, what's their impact on Oregon's energy supply?

Semiconductor manufacturing is an energy intensive business; such facilities can require 20 to 70 MW of power load, according to Tom Guantt, a spokesman for Pacific Power. While that's a laughably wide range, none of the solar manufacturers were willing to disclose the specific energy footprint of their facilities. Pacific Power's service territory includes just one of the announced solar manufacturing plants in **Oregon** -- the Peak Sun facility in Millersburg -- while Portland General Electric (PGE) is responsible for servicing the other new developments, including the SolarWorld and **Sanyo** facilities, as well as the [Solaicx](#), [XsunX](#) and [Spectrawatt](#) factories.

Whether its 20 or 70, a tens-of-megawatts load isn't easy for the grid to absorb, especially when it's concentrated at one site. Much like turning on too many kitchen appliances at once can overtax your home's circuit breaker, ramping up heavy industrial manufacturing without prior planning would destabilize the local power grid. To avoid this problem, **Oregon** utilities have had to prepare, by adding new substations, upgrading distribution and transmission lines - and, potentially, building or buying additional generation. (Yes, that means power plants.)

Solar manufacturing isn't the only factor driving the region's need for additional power. According to Steve Corson, a spokesperson for PGE, power demand in the region, currently about 2,500 MW, is expected to grow twice as fast as the national average. That means the utility can say it will be able to meet increased demand with [renewable energy](#). Because solar manufacturing plays a small role in the state's growing power demand, it's likely that utilities' progress toward meeting the state's

Renewable Portfolio Standard (which requires 25 percent of electric demand to come from new renewables) will be more than sufficient to cover the additional demand.

New generation aside, the need for infrastructure development is likely to play a bigger role in promoting green collar jobs in the state. Sanyo's plant, slated to open in October 2009, makes it the first company to sign on to the City of Salem's Renewable Energy and Technology Park (RETP), an 80-acre parcel of land zoned for industrial uses that had been undeveloped since the city acquired the rights in 1992. To meet anticipated power demand at both the RETP and the nearby Mills Creek industrial park, PGE is developing a new substation, says Rick Scott, urban development director for the City of Salem.

Sanyo's interest in the location, and PGE's willingness to develop the substation, could pave the way for future green manufacturing. Scott says the city is currently in talks with two other companies interested in siting green industrial operations in the RETP, and the area is also zoned for research and development operations.

While new development is exciting for Salem, another opportunity is more appealing to utilities, as well as to local economic development officials across the state: reusing existing manufacturing capacity. **Oregon**, like many states in the U.S., has numerous manufacturing and industrial sites that have been closed over the past few decades. Pacific Power told us in an email "In some cases in the Northwest, high capacity lines are already in place because in the past there were large wood products or other industrial plants in an area." That infrastructure could be key encouraging new development of solar and other green manufacturing operations.

To that end, Pacific Power is upgrading and reactivating a line near Roseburg, Ore., that used to supply a nickel mine. While the utility didn't specify who would benefit from that specific upgrade, Guantt wrote that "sites like that could be suitable for new large energy users such as polysilicon manufacturers. And it would be great from an economic development standpoint to bring manufacturing jobs back to these areas."

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