

U.S. Solar Market to Double in the Next Year

Monday, February 08, 2010

U.S. Solar Market to Double in the Next Year

Government incentives and lower solar prices are starting to pay off.

By Kevin Bullis

In a few years, the United States is likely to be the world's largest market for solar power, eclipsing Germany, which has taken the lead as a result of strong government incentives in spite of the relative paucity of sunlight in that country. A number of factors could make growth possible in the United States--especially changes in legislation that give utilities incentives to create large solar farms.

Last year, the U.S. solar industry got [off to a slow start](#), but sales rebounded in the second half of the year, largely because of a drop in the prices of solar panels of up to 40 percent, partly caused by an oversupply due to the recession. Revenues for many solar companies were likely flat, but the megawatts of solar installed in the United States overall grew by 25 to 40 percent last year, says Roger Efird, the chairman of the [Solar Energy Industry Association](#) and the managing director of Suntech America, a branch of [Suntech Power](#), the largest maker of crystalline silicon solar panels in the world.

This year, Efird says, solar installations could double, reaching a gigawatt of capacity. "That's a big number," he says. "If you are in the solar business, you were talking watts 15 years ago, you were talking kilowatts 10 years ago, and you have trouble even talking megawatts today."

The growth had several likely causes, including decreasing prices for solar panels and installation costs, as well as increasing state incentives, which can make solar far more attractive. According to Harry Fleming, the CEO of [Acro Energy Technologies](#) in Oakdale, CA, these changes mean that the cost of a typical five-kilowatt rooftop solar system has dropped from \$22,000 after state incentives are applied (\$40,000 without them) to \$16,000 in the last 18 months. Prices are expected to fall to \$13,000 by the end of the year (\$25,000 without incentives). "This is going to make solar a middle-class product," he says.

At the same time, it seems likely that [projects funded through the federal stimulus package](#) will get underway this year. The U.S. General Services Administration and the U.S. Department of Defense, for example, are both ready to start solar projects, Efird says. "A big kick for us in 2010 will be these stimulus funds we've been waiting for," he says.

U.S. Solar Market to Double in the Next Year

Another key could be solar projects undertaken by utilities. Efirid says that a small change in the tax code has allowed utilities to take a tax credit for solar investment. After that, "we began to see, really for the first time, utilities starting to get interested in solar as a way of generating wholesale electricity that they could then resell." His company has done demonstration projects in the past, he says, "but we've never looked at the utility sector and said that's a market in itself." About a third of the new installations next year could come from utilities.

It's unlikely that a climate bill that puts a price on carbon dioxide will pass this year, but other legislation could further help the industry. A jobs bill, for example, might include incentives that were originally included in a climate and energy bill passed in the House last year. These incentives could include a renewable energy standard, which would require utilities across the country to use renewable energy. Just as important could be a national standard for connecting solar installations to the grid. Right now some states don't have laws that allow people to connect rooftop solar panels to the grid and receive credit for the power they generate, and the laws that do exist vary from state to state. A uniform standard could speed sales and installations.

Some experts, however, expect that a large number of the solar projects planned for the next several years will fall through--perhaps as many as 75 percent--because of the relative "immaturity" of the industry. Few large projects have been built so far, and so there will likely be large cost overruns.

For many solar companies, regulations, land-permit requirements, and the need for transmission lines have slowed down projects. In some cases, smaller solar projects located close to substations have a better chance than large solar farms that require special new transmission lines, even though the latter could, in theory, be more economical. One thing that could help with this would be designated areas that are preapproved for solar farms, and equipped with transmission lines that would serve a cluster of such farms. "But that would require a degree of strategic thinking that's currently absent," says Jim Barry, the chief executive of the Dublin, Ireland-based NRT, a company that's currently developing large solar projects in the United States.

Even with these problems, according to some estimates, the U.S. could account for 25 percent of the world's solar market by 2013, up from about 8 percent today. But the fraction of this solar that will be supplied by U.S. companies is less certain. Arun Majumdar, the director of the Advanced Research Projects Agency for Energy, said in testimony before the House Science and Technology Committee last month that over the last 15 years, the U.S. went from supplying 45 percent of the world's solar panels to less than 10 percent. But the growing U.S. market has started to attract solar

U.S. Solar Market to Double in the Next Year

manufacturing. Suntech Power, for example, which currently [makes all of its solar panels in China](#), is building a solar factory in Phoenix this year. "We're the first Chinese company to export jobs to the U.S.," Efird says.

Copyright Technology Review 2010.