

With lower prices for the technology and an array of clean-energy incentives to help investors, Minnesota saw a big jump in solar energy projects last year. But there's still a long way to go.

By **DAVID SHAFFER**, Star Tribune  
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The solar power business in Minnesota is booming, thanks to clean-energy subsidies and lower prices for photovoltaic cells.

The Minnesota Commerce Department said Friday that solar electric installations hit a record high of 248 last year, a threefold increase over 2009. Total installed capacity for solar power more than doubled.

"What's really driving it is the 40 percent decrease in installed cost in the last 18 months," said Nathan Franzen, director of solar development for Westwood Professional Services of Eden Prairie, which designs and manages solar construction projects.

Federal stimulus money also spurred the solar industry, creating jobs, increasing competition and helping to drive down costs, Franzen said. A federal investment tax credit, a Minnesota-made solar credit and the "Solar Rewards" incentive from Xcel Energy, the state's largest utility, further boosted the industry locally, he and others said. The U.S. solar market also is doing well. Installations of rooftop solar, hot-water systems and other technology grew 67 percent last year, the Solar Energy Industries Association reported last month. Grid-connected installations doubled in 2010. Most of the new solar-electric arrays were installed at residences, financed by homeowners. More than 400 businesses in Minnesota also installed systems last year, a substantial increase. The systems typically have two-way meters allowing electricity to be sold back to a utility, usually during the summer.

The state's largest solar array, designed by Westwood and owned by Best Power International of Hopkins, is atop the Minneapolis Convention Center. The \$3 million, 600-kilowatt project was completed in November and supplies 5 percent of the convention center's power.

Minnesota now has about 4 megawatts of installed solar, which is enough to power 700 to 1,000 homes. That's still less than 1 percent of electricity needed in the state, however. By comparison, Xcel's two Prairie Island nuclear power plants have an output of 1,100 megawatts combined. Xcel has the most solar projects on the grid – 327 homes and businesses, including 166 added in 2010 under its Solar Rewards program, which helps pay installation costs. The program gives Xcel credits toward a state mandate to get 25 percent of its power from renewable sources by 2025.

"The incentives have spurred a lot of electricians looking at getting into the business," said John Wold, manager of the Xcel program. Customers still face a significant investment, and some people will get a better payback from efficiency measures, Wold said.

Murphy Warehouse Co. installed solar power panels on two warehouses in Fridley and a third in Minneapolis last year. CEO Richard Murphy Jr. said the projects cost \$100,000, rather than \$1 million, because of the incentives. Return on investment will take four years, he added. "We would not be doing solar without that help," Murphy added. "I am just being honest."

Kellye Rose's family installed a 5.4-kilowatt system on their home in Burnsville in June and began selling back surplus electricity over the summer. That slacked off in the fall, as expected, she said. Then came the big December snowstorm. It buried the arrays and ended their electrical production for months. "With the record levels of snow, it was a disappointment for me," Rose said. Even so, she still expects the solar panels to produce as much electricity as her family uses in a year.

David Shaffer • 612-673-7090