

Michigan's largest solar-panel installation goes on line this week at Padnos Iron & Metal in Wyoming

By Julia Bauer | The Grand Rapids Press

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WYOMING -- Biting wind and blowing snow could not chill the fervor for solar power at Padnos Iron & Metal Co. recycling, where the state's largest solar-panel installation goes on line this week.

Banks of solar panels -- 636 in all -- cover 15,000 square feet atop the Padnos recycling center at 500 44th St. SW.

"We had to test it on Dec. 8, the worst day of the season," said Jeff Padnos, the firm's president. "Even in a snowstorm, the thing was working."



Journeyman Mike Carlon, with Swanson Electric company in Grant, works on wiring the combine box for the new solar panels on top of the Padnos Iron & Metal roof in Wyoming on Friday afternoon.

The installation is the first big solar project for Cascade Renewable Energy Solutions, a subsidiary of Fred Keller's Cascade Engineering Inc.

Although the Cascade Township firm has been producing parts for Swift windmills and selling windpower since 2008, the solar sector heated up last summer.

At least four forces came together to make a business case for solar energy in Michigan:

- Last year, the state passed a renewable portfolio standard, including a 2015 deadline for public utilities to tap 10 percent of their supply from alternative energy sources;
- Consumers Energy Inc., the Jackson-based utility supplying Padnos, launched a kilowatt-buyback for energy generated by solar power, paying well above market rate on an eight-year contract. Through May 1, the utility will pay 45 cents per kilowatt generated from commercial sources, and 68 cents from residential. The rate drops to 37.5 cents commercial, 52.5 cents residential after May 1.
- Alternative energy tax credits can offset some of the cost.

- State property tax breaks are available for alternative energy installations.

One other force, relatively common in West Michigan, was the trust built between two long-standing family businesses.

"Our companies have a long history, back to the 1940s," Padnos said. His father helped Keller's father get steel and other scrapped metals that were scarce in the months after World War II.

"We can conduct business on a handshake, and rely on each other to make it happen," Keller said.

"If Fred says it's going to be OK, it's going to be OK," said Padnos, 61.

On the strength of a handshake, Padnos and Keller agreed on a \$1.27 million solar panel deal.

Michael Ford, leader of Cascade's renewable energy group, assessed the recycling center's flat rooftop for structural strength, and set out the business case for an eight-year payback.

"Consumers Energy capped the output at 150 kwh," Ford said. "It's the largest project in Michigan, at this time."

The 3-by-5-foot panels are supplied by Sharp, with photovoltaic cells built in Japan and assembled in Tennessee. They are rated to withstand one-inch hail at 135 miles per hour, and handle winds up to 120 mph, Ford said.

A crew of 20 from Cascade and Grant-based Swanson Electrical Services Inc. put in the system. First, Padnos had a 30,000-square-foot white-rubber-membrane roof laid down, to reflect heat from the banks of solar panels.

"Photovoltaics work better in cooler weather," Ford said.

But December? In Michigan?

"We want to prove it works in winter," Padnos said. As the first big commercial installation under Michigan's new alternative energy stimulus programs, output from the Padnos project will be tracked into February, when the company plans a big dedication party.

"I think this is the beginning of a pretty robust market for solar," Ford said.

"You have to be somewhat of a patient investor, putting this product in. You're still going to use energy. Why not buy it from yourself?"

Those years to reach payback will pass quickly, said Keller, 65.

"What's valuable, is that in years eight to 25 and beyond, it's free electricity," he said.

Wind power is another option, especially along the Lake Michigan shoreline.

But inland, solar may be the ticket.

"Arizona has about six sun-hours per day, on average. Michigan is 4.6," Keller said. The difference isn't too drastic.

"It's not as uneconomical as people think," he said.

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