

# WALL STREET JOURNAL

## Japan Solar Firm Eyes Competitive U.S. Market

Solar  
Frontier Plans to Build Factory in Buffalo, New York By  
MARI IWATA **CONNECT** Sept. 26, 2014 6:21 a.m. ET



Inside Solar Frontier's Kunitomi factory in Miyazaki prefecture. *Solar Frontier*

<http://online.wsj.com/articles/japanese-solar-firm-eyes-competitive-u-s-market-1411726893>

Undaunted by vicious competition between U.S. and Chinese solar panel makers pushing prices lower, one Japanese solar company has its sights set on North America and plans to build a factory in upstate New York.

Solar Frontier KK, the solar cell manufacturing unit of oil refiner [Showa Shell Sekiyu 5002.TO -1.01%](#) KK, said the new factory, which will be located in Buffalo, will likely start commercial operations around 2018.

"It's a sustainable market," Atsuhiko Hirano, Solar Frontier's president, said about the U.S. in a recent interview with the Wall Street Journal. "One of the good things about the U.S. is solar is adopted with relatively little help from the government. The risk of policy change affecting solar demand is small."

He said his company is now studying the feasibility of joint research and development and manufacturing of solar cells with the State University of New York.



Atsushi Hirano, the new president of Solar Frontier. *Solar Frontier*

Solar power-related costs have fallen sharply in the U.S. to

levels where power generators only need modest financial help to make generation worthwhile. In some states where sunlight is plentiful, electricity prices from utility-scale solar power stations are cheaper than the average power price, Mr. Hirano said.

"Solar is gaining significant momentum in the U.S.," said Tom O'Sullivan, founder of Tokyo-based energy consultancy Mathyos.

Data from the U.S. Energy Information Administration show that solar was the second largest type of new power capacity across the country in 2013, and in six states such as Arizona and Nevada newly added power capacity was 100% solar. Solar power cost \$0.11 per kilowatt-hour in 2013, roughly half the \$0.21/kwh it cost in 2010, according to the U.S. National Renewable Energy Laboratory. The \$0.11/kwh figure is also slightly less than the U.S. average power price of \$0.12/kwh.

Solar Frontier was set up in 2006 by Showa Shell as an effort to diversify its energy business amid falling oil demand in Japan. The unit turned a profit for the first time in the fourth quarter of 2012 and supported Showa Shell's struggling oil business in the first half of this year. In the January to June period, Solar Frontier's operating profit more than doubled while Showa Shell's oil unit's operating profit plummeted to less than a tenth of what it was a year earlier.

Dispelling the notion that Japanese products are significantly more expensive than their rivals, Mr. Hirano said Solar Frontier has the ability to be a contender in the U.S. without big public financial help. He declined to discuss production costs further.

The company's panels have a CIS thin-film, which uses glass instead of a conventional silicon-base. A person close to the situation told the Wall Street Journal that Solar Frontier's strength is its spattering technology, which can form circuits on normal glass, whereas other thin-film solar cell producers use very expensive high-end glass for electric devices such as smart phones. High-end glass contains almost no impurities therefore is easier to form circuits on it.

Normal glass costs less than a 10th of glass used for flat television displays, according to websites that compare glass

press.

"Silicon-based solar panels are already commoditized. Thin-film panels appear to have a bigger future," said Hidetoshi Shioda, an analyst at SMBC Nikko Securities.