



## NEWS RELEASE

# Solar Frontier to Build “No.4” Solar Module Plant in Japan’s Tohoku Region

Construction of 150 MW CIS solar module Tohoku Plant with latest mass-production technologies next step toward global growth

**Tokyo—December 19, 2013** —Solar Frontier today announced its decision to construct a CIS solar module plant (provisional name: Tohoku Plant) with nominal production capacity of 150 MW in the Tohoku region of Japan. This will be Solar Frontier’s fourth manufacturing facility following its three plants in Miyazaki. The Tohoku Plant will be located at Ohiramura in Miyagi Prefecture and is scheduled to start production in March 2015.

The Tohoku Plant will leverage Solar Frontier’s latest mass-production technology, incorporating advanced features that increase manufacturing process efficiencies. This will enable the manufacture of high-performance CIS solar modules at higher conversion efficiencies and world-class cost levels. The Tohoku Plant will also serve as a blueprint for future manufacturing facilities outside of Japan, in line with worldwide demand growth and Solar Frontier’s mid-term plans to build future plants outside of Japan.

Solar Frontier plans to invest about 13 billion yen to build the plant, including a Domestic Business Promotion Grant from the Ministry of Economy, Trade and Industry (METI), a Miyagi Business Promotion Grant from Miyagi Prefecture, and a promotion subsidy from Ohiramura for the entry of new enterprises. Products manufactured at the Tohoku Plant will be intended mainly for sales in the local region.

Hiroto Tamai, President and Representative Director at Solar Frontier, highlighted the importance of the new plant for Solar Frontier’s future growth plans and as part of the economic revitalization of the Tohoku region. Tamai stated, “By extending new mass-production technologies proven at the Tohoku Plant to manufacturing and sales outside of Japan, Solar Frontier will establish itself as a strong global player. And by constructing the Tohoku Plant, Solar Frontier will help to revitalize the Tohoku economy, through collaboration with local industries and the creation of new jobs. Solar Frontier will continue to contribute to society by providing clean, renewable energy through its environmentally-friendly and durable CIS technology that has been proven throughout the world.”

In 2013, Solar Frontier is celebrating the 20th anniversary of its R&D work on CIS technology. The company has grown steadily since opening its first 20MW plant in 2007, growing revenues in the residential, commercial and utility-scale markets. Solar Frontier now has gigawatt-scale manufacturing capacity, including one of the world’s largest plants, the Kunitomi Plant, which opened in 2011 in Miyazaki, Japan. Its production processes are much more energy efficient and environmentally friendly than those used to manufacture crystalline silicon modules. Solar Frontier has also developed products and systems that deliver high added value to customers, including the thin, lightweight Solacis neo module from its 60MW MP2 factory, its CrossOne installation system for rooftop applications, and its optimized utility-scale systems. In R&D, Solar Frontier boasts world-class capabilities, achieving a world-record conversion efficiency of 19.7% with a cadmium-free thin-film solar cell (approx. 0.5 cm<sup>2</sup>). The construction of the 150 MW Tohoku Plant marks Solar Frontier’s next step toward global growth.

## Outline

Plant location	No.2 Sendai North Central Industrial Park, Ohiramura, Kurokawa-gun, Miyagi Prefecture, Tohoku Region
Area	Lot area: 70,000 m <sup>2</sup> Total floor area: 15,000 m <sup>2</sup>
Production capacity	150 MW
Start of production	By March 2015 (scheduled)
Employees	Planned workforce: About 100
Investment	Approximately 13.0 billion yen

## Concept image of completed plant



### About Solar Frontier

Solar Frontier K.K., a 100% subsidiary of Showa Shell Sekiyu K.K. (TYO:5002) ("Solar Frontier"), has a mission to create the most economical, ecological solar energy solutions on Earth. Building on a legacy of work in solar energy since the 1970s, Solar Frontier today develops and manufactures CIS (denoting copper, indium, selenium) thin-film solar modules for customers in all sectors around the world. Solar Frontier's gigawatt-scale production facilities in Miyazaki, Japan, integrate compelling economical and ecological advantages into every module: from lower energy requirements in manufacturing to the higher overall output (kWh) of CIS in real operating conditions. Solar Frontier is headquartered in Tokyo, with offices in Europe, the U.S.A., and the Middle East. Visit [www.solar-frontier.com](http://www.solar-frontier.com) for more information.

### Showa Shell Sekiyu K.K.

Showa Shell Sekiyu K.K. is listed on the Tokyo Stock Exchange and has roots dating back more than 100 years in the downstream energy business.

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