

Japan firm develops 'sun-chasing' solar panels

June 3 2011



Takashi Tomita, a Tokyo University professor and researcher for Japanese electronics giant Sharp, displays an innovative solar power panel using moving mirrors that follow the sun throughout the day, at a preview in Tokyo, on June 3.

A new Japanese solar power device can generate twice the electricity of current models thanks to moving mirrors that follow the sun throughout the day, according to its developers.

Smart Solar International, a Tokyo start-up that also has an office in California, will start producing the system in Japan in August, hoping it will be adopted in tsunami-hit areas along the northern Pacific coast.

Sample sales are set to begin in October, with overseas sales targeting especially Asia and the Middle East set for 2014 or earlier.

The device features a row of aluminum mirror bars that can slowly rotate as the sun moves across the sky and reflect its light back onto a central tube that is packed with high-performance, multi-layered [solar cells](#).

Its inventors say the system requires far less silicon -- the most expensive component, which is imported mostly from China at the moment -- than the conventional larger flat [photovoltaic cell](#) panels.

The tube has a system to prevent overheating, which reduces the efficiency of power generation, and the excess heat can be used to heat water.

"You can get both electricity and heat from the same device," said Takashi Tomita, a former Sharp Corp. executive who heads the spin-off from the University of Tokyo's Research Center for Advanced Science and Technology.

Demand for renewable energy is set to grow in Japan since the March 11 quake and tsunami crippled a [nuclear power plant](#) on the northeast coast, causing the worst atomic disaster since Chernobyl 25 years ago.

The centre-left government has announced a major energy policy review that would promote solar and other alternative energies.

"We must send our product to the (disaster) regions first," said Tomita, also a professor at the University of Tokyo's research centre.

"I want to ship this as early as possible to convenience stores and to other facilities where people congregate."

In coming years, Tomita hopes to sell the system abroad.

"Southeast Asia needs a source of energy as demand keeps growing,"

Tomita said, pointing out that countries including Vietnam and Thailand do not have much oil and gas, unlike Indonesia or Brunei.

The company also aims for sales in India and the Middle East.

Next week Smart Solar plans to exhibit a parabolic mirror version of the system at the Intersolar trade fair in Munich, Germany.

(c) 2011 AFP

Citation: Japan firm develops 'sun-chasing' solar panels (2011, June 3) retrieved 2 May 2024 from <https://phys.org/news/2011-06-japan-firm-sun-chasing-solar-panels.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--