

Honda to Mass Produce Next-Generation Thin Film Solar Cell

December 19 2005

Honda announced its plan to begin mass production in 2007, of an independently developed thin film solar cell composed of non-silicon compound materials, which requires 50% less energy, and thus generate 50% less CO₂, during production compared to a conventional solar cell. A mass production plant with annual capacity of 27.5 megawatts will be established at Honda's Kumamoto factory.

Honda will produce and sell solar panels in a limited area, starting from 2006 fall, using assembly line within Honda Engineering Co., Ltd., the production engineering subsidiary of Honda.

By using thin film made from a compound of copper, indium, gallium and selenium (CIGS), Honda's next-generation solar cell achieved a major reduction in energy consumed during the manufacturing process to approximately 50% of the amount required by conventional crystal silicon solar cells. Thus, this new solar cell is more environmentally-friendly by reducing the amount of CO₂ even from the production stage. Further, this next-generation solar cell has achieved the highest level of photoelectric transfer efficiency for a thin film solar cell (almost equivalent to the conventional crystal silicon solar cell).

Since spring 2002, Honda has been using and monitoring the performance of this solar cell, first at the Outboard Engine Plant in Hosoe, and then also at 12 other Honda facilities including Honda Engineering headquarters and the Honda Wako Building in Japan and 3 overseas sites such as the U.S. and Thailand.

Achieving lower costs and higher photoelectric transfer efficiency is required in order to expand use of solar cells which will help protect the global environment. This non-silicon thin film solar cell has been attracting significant attention as a potential solution to these challenges. The only remaining challenges were the stabilization of performance and development of mass production technologies. The mass production of Honda's next-generation solar cell became possible with a new mass production process for thin film solar cells developed independently by Honda Engineering – a production engineering company that has long developed production equipment and technologies for Honda's motorcycle, automobile, engine, electric motor for hybrid vehicles and other items.

Source: Honda

Citation: Honda to Mass Produce Next-Generation Thin Film Solar Cell (2005, December 19)
retrieved 20 April 2024 from
<https://phys.org/news/2005-12-honda-mass-next-generation-thin-solar.html>

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.