

The Current Status of Japanese PV R&D and Industry

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Japanese R&D for photovoltaics has been conducted by METI since 1974 as “Sunshine Project”. The project started with a low cost crystalline silicon technology followed by thin film technologies and super high efficiency technologies, and 30 years’ R&D has realized remarkable cost reduction in a PV system down to 1/100. A grid connected and buy-back systems have been introduced since 1992 and subsidy for initial investment has promoted roof-top market in Japan. In 2009, Japanese government decided to introduce a Japanese Feed-In-Tariff system. As a result, Japanese market will be expanded by a factor of 2.

Until 2006, Japanese PV companies such as Sharp, Kyocera, Sanyo etc. shared nearly 50% of the world market. The main product has been crystalline silicon PV, while Kaneka, Mitsubishi Heavy Industry, Fuji Electric, Showa-Shell (current Solar Frontier), Honda Soltec and Sharp started thin film businesses. Current situation after an economic crisis in 2008 pressurizes further cost reduction, implying the significance of efficiency improvement and manufacturing cost reduction.

In this presentation, current PV R&D status and future outlook will be presented. Current situation of Japanese PV industry is also overviewd.