

Chinese Company Begins Thin-Film Solar Cell Production

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Nantong Qiangsheng Photovoltaic Technology Co. Ltd. (QS Solar, Shanghai, China) will begin making thin-film solar cells this month, using a new production line in Nantong, Jiangsu, with the biggest production capacity in China (25 MW). The company announced recently that it would add two more production lines in 2008, bringing the total production capacity to 75 MW. Officials said they expect that in two years the price of thin-film solar cells will reach 1 yuan (14 cents), far below the current price of 4-5 yuan (55-70 cents) for conventional photovoltaic cells.

QS Solar, set up by the Qiangsheng Light Industry Group with an investment of 1 billion yuan (\$138M), introduced a 25 MW amorphous silicon film solar cell production line from the United States with an investment of \$25M. The production line is undergoing installation and debugging, and batch production will start this month.

The company said the production line has the largest single-line capacity in China, with a photoelectric conversion efficiency of >6%. By using domestic materials, and by automating the ultrasonic wave cleaning, automatic welding and high-precision overlapping steps, the company said it can approach the cost of thermal power generation.

The company also plans to set up several 1-5 MW photovoltaic stations in Inner Mongolia, Tibet and Xinjiang over the next three years. At present, a 1 MW polycrystalline silicon power station requires an investment of \$7M abroad; a solar energy demonstration project in Tibet and elsewhere in China requires an investment of more than 60 million yuan (\$8.3M). But a 1 MW photovoltaic station equipped with Qiangsheng's amorphous silicon film cells requires only 24 million yuan (\$3.3M), about 40% of the average figure for such projects in China.

According to the government's survey of China's photovoltaic industry, polycrystalline silicon cells account for 95% of photovoltaic products, and ~90% are exported. The report points out that the cost of photovoltaic power generation is about 4 yuan/kWh (55 cents), and by 2030 photovoltaic power will be able to compete with conventional thermal power in price.

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