

Japan offers Massive Growth for Solar

Written by Sarfaraz Khan
Thursday, 03 May 2012 09:17

The Asia Pacific PV market has a bright future ahead. With pro-solar government policies, the market is expected to grow rapidly until 2015. The region is expected to show a growth of 45% in 2012. Most of the development will happen in China, Japan, India, South Korea and Australia while China and Japan will be the regional leaders. The leading European markets of Italy and Germany could face a possible decline in demand in 2012 owing to austerity measures. The Asia Pacific PV markets, on the other hand, are poised to attract foreign investments in this sector.

The Japanese solar sector received a boost this week when a proposal of its much-anticipated Feed-in-Tariffs (FiT) program for the renewable energy sector was announced. The Ministry of Economy, Trade and Industry has suggested that the government pay \$0.51 to solar power providers for electricity they produce per kilowatt-hour. This rate is exactly what Japan Photovoltaic Energy Association had recommended; however, it also includes a five percent government tax, which if deducted, reduces the actual FiT rate to \$0.49.

The current rate of FiT is recommended for 20 years and will be implemented from July 2012. The move was welcomed by solar PV manufacturers around the world and particularly in Japan. Tetsuo Kuba, President of Kyocera Corp, one of the leading solar panel producers and suppliers, said, "The start of the feed-in tariff program will be a major step forward to expand the solar power market." The current incentive is expected to increase the newly installed PV capacity for 2012 by 1GW to 1.5GW.

After the Fukushima Nuclear disaster, Japan has been trying to scale away from nuclear power while increasing its reliance on renewables. Before Fukushima happened, nuclear energy accounted for 30% and renewables accounted for 9% of Japan's total energy needs. After Fukushima, Japan started closing down its nuclear power plants for safety checks. The last commercial reactor of 50 in total will shut down on 5th May and will make Japan completely nuclear free, following a gap of nearly 40 years.

According to recent polls, 80 % of the country's population supported the idea of completely abandoning nuclear power. On the other hand, support for solar energy is increasing. This was evident in the fifth annual 'PV Expo Japan' held in early March this year, which witnessed a record attendance.

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The current FiT program will replace the old Renewable Portfolio Standards (RPS), which has been in effect since April 2003. The RPS made it mandatory upon conventional energy retailers to provide a certain predetermined percentage of “new energy” from wind, biomass, geothermal, small-size hydro and solar generation. The retailers had an option to either produce the new energy themselves or obtain it from a third party.

Unlike RPS, the new FiT system is expected to attract local and foreign investments in the solar sector. Japan’s third largest telecommunications company, Softbank Corporation, is interested in setting up solar power plants across Japan that could generate up to 200MW. The company’s Chairman and CEO Mr. Masayoshi Son said, “I hope various players will enter the clean energy market.” Softbank’s SB Energy will function as its solar energy business unit. The company plans to build its first 30MW plant in the city of Yonago, Western Japan, which will start operating by the end of 2013.

Kyocera, , in collaboration with IHI Corporation and Mizuho Corporate Bank plans to build another solar power plant, the biggest in Japan, in the southern city of Kagoshima. Kyocera will bring its three decades of experience in the solar industry, IHI Corporation will provide 1,270,000 square meters of land for solar cell and plant installation, and Mizuho Corporate Bank will provide financial services. The plant will be built at a cost of approximately \$309 million and will generate 70MW of energy. The project aims to provide clean electricity to 22,000 households as well as reduce carbon emissions by 25,000 tons.

Meanwhile, Kintetsu, a private Japanese electric railway company, has also revealed its plans to build a 30MW solar power plant in Mie Prefecture. The company announced its plans in light of the current government’s FiT incentive.

Although the tariff offers guaranteed payments for 20 years, the government will revise the tariff each year. If the rates are reduced in subsequent years then companies like Softbank Corp, Kyocera and Kintetsu, who are able to set up plants in the initial years, will secure the highest rates. Kazuhiro Ueta, head of the panel responsible for setting the rates, believes that the rates are in accordance with the global industry standards. He implied a decrease in the rates in subsequent years when he said, “The program is designed to give favorable rates for the first three years, so we factored that in.”

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The government incentives are primarily aimed towards local PV manufacturers. Japan has erected various direct and indirect entry barriers for foreign organizations. Companies outside of Japan may find it easier to enter into this market through local partnerships.

The world's biggest solar panel manufacturer from China, Suntech Power, entered into the Japanese market in 2006 by acquiring MSK Corporation. The company currently commands a five percent market share, which it expects to double in 2012. Amid dumping and subsidies allegations in the US, several Chinese solar companies already had their eyes fixed on Japan. Trina Solar has set up an office in Tokyo, while Yingli Green Energy has set up a subsidiary in Japan. Another group of Chinese companies, Chaori Solar Energy and Sky Solar Holdings, plan to add 100MW to Japanese solar capacity this year.

Unlike India and China, the Japanese PV market will remain focused on home-based and commercial applications. The country was the second biggest Asian PV market long before the debate on FiTs started. With the current government incentives and subsidies, it will retain the second spot while its PV capacity will grow rapidly. Japan is expected to reach 20GW of renewable capacity by 2014 and will become the third largest photovoltaic market in the world.