

Global Photovoltaic (PV) Market & Insights into Chinese & Japanese Photovoltaic (PV) Markets (2010 – 2015)

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Abstracts

The PV market is observed to be one of the fastest growing sectors buoyed by different government incentives and intense R&D activities. PV technology is emerging as the major technology for generation of power in the world; which is evident from the continuous growth witnessed in the last decade. In order to spur adoption, there was also introduction of several subsidy programs in Germany and Japan such as New National Energy Strategy for 2030 by the Ministry of Economy, Trade and Industry (METI), Japan, Cool Earth 50 to reduce global carbon dioxide emissions, Renewable Energy Sources Act (EEG) of 2000 introduced in Germany.

Amongst the different materials used in the manufacture of PV cells, amorphous silicon is observed to generate maximum revenue. This is mainly due to its low temperature coefficient and low power loss. Trackers help to increase the solar array's efficiency by up to 40% and hence there are innovations centered on enhancement of designs with improved reliability.

The key applications of PV systems include consumer electronics and telecommunications, building integrated PV applications, grid connected power supply, military and space applications, and others. BIPV application contributes maximum towards the growth of PV systems market amongst all the applications. This is mainly due to the gradual adoption of this technology in industrial, commercial, and residential buildings. The other applications of PV system include water pumping, automotive, commercial lighting, and more.

The Chinese PV market is largely driven by the growing demand for energy and the huge volume of export market. It is expected that the government of China will continue

with its small scale and targeted incentive programs in order to achieve bigger strides in the development of renewable energy.

Federal policies drove the expansion of PV market in Japanese region. The country's new national solar goals include 28,000 MW of new solar capacity by 2020 and 53,000 MW by 2030. The key motivations behind such aggressive targets include regaining of world market leadership, addressing of global environmental goals of reducing greenhouse gas (GHG) emissions, and increasing the level of energy independence.

The study of export import trade in Chinese and Japanese PV markets for the HS code 854140 reveals that there are no technical barriers to trade in Japan. Some of the non-tariff barriers to trade include inadequate workforce skills and training, lack of adaptability to conventional systems/arrangements, and imperfect capital markets. The design standards and specifications defined for solar panels by World Trade Organization (WTO) and Technical Barriers to Trade (TBT) agreement are expected to enhance the penetration as well as adoption levels.

The global photovoltaic market is expected to reach \$130.0 billion in 2015 from \$55.7 billion in 2010 at a CAGR of 18.5% from 2010 to 2015. The companies in Japan and China largely adopt strategies such as R&D agreement with universities, acquisition of certifications, expansion of production facilities, and undertaking of installation projects in order to achieve tremendous growth in the market.

Scope of the report

This research report categorizes the global photovoltaic market on the basis of different types of PV systems, different components used in PV systems, uses of these in various applications and geographical analysis, forecasting revenue, and analyzing trends in the market.

On the basis of types

The PV market by types is segmented into thin film PV market, concentrated PV market, and solar PV market. The market trend for these types is discussed.

On the basis of components

The component market is segmented into cells, modules, optics, and trackers. The cells are further classified into crystalline silicon PV cells and thin film PV cells. The thin film

PV cells are further classified into amorphous silicon thin film PV cells, cadmium telluride (CdTe) thin film PV cells, copper indium gallium selenide (CIGS) thin film PV cells, and others (cells based on OPV, DSSC). The market trend for these products is discussed.

On the basis of application

The application market is segmented into consumer electronics and telecommunications, grid connected power supply, building integrated photovoltaic applications, military and space applications, and others. The market trend for these applications is discussed.

On the basis of geography

North America

Europe

Asia

ROW

Each section will provide market data, market drivers, trends and opportunities, key players, and competitive outlook. This report will also provide market tables for covering the sub-segments and micro-markets. In addition, the report also provides more than 20 company profiles covering all the sub-segments.

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