

Trends in the Global Solar Photovoltaics Industry

https://marketpublishers.com/r/T60696060FFEN.html Date: August 2012 Pages: 170 Price: US\$ 450.00 (Single User License) ID: T60696060FFEN

Abstracts

Photovoltaics, today, is a fast-growing and dynamic industry and its success story has been driven both by national support schemes and first-class research and demonstration. The current levels of dependence on fossil fuels, the need of reducing the carbon emissions associated with energy use and the prospects of developing a new and extremely innovative technology sector, make photovoltaics increasingly attractive.

Although photovoltaic currently appears a costly option for producing electricity compared with other energy sources, many countries support this technology because of its promising future potential and the additional benefits besides generating electricity.

About 5.56 GW of PV capacity were installed during 2008 (an increase of about 150 % over the previous year) which brought the total installed capacity to 13,4 GW. By far the greatest proportion (75 %) was installed in Spain and Germany alone. If Italy, the US, Korea and Japan are also included, then over 96 % of PV installations in 2008 occurred in six countries.

It is estimated that by that by 2050, PV will provide around 11% of global electricity production and reduce 2.3 gigatons (Gt) of CO2 emissions per year.

As PV matures into a mainstream technology, grid integration and management and energy storage become key issues. The PV industry, grid operators and utilities will need to develop new technologies and strategies to integrate very large amounts of PV into flexible, efficient and smart grids. Future work needs to address technical developments closely with standards development, as well as changes in regulatory frameworks, so that photovoltaic technology becomes an active part of the tomorrow's electricity networks.



Aruvian's R'search presents Trends in the Global Solar Photovoltaics Industry – an analysis of the major trends as observed in the solar PV industry worldwide. The report, further to covering the major trends, also analyzes the major global markets in terms of industry statistics, market developments, major markets and players, and much more.

This research report also takes a look at the economic feasibility of solar power. Market strategies, future trends, industry highlights and developments, constraints in the industry, are some of the highlights included in the report Trends in the Global Solar Photovoltaics Industry.



Contents

A. EXECUTIVE SUMMARY

B. UNDERSTANDING PHOTOVOLTAICS

- B.1 Overview
- B.2 Historical Background of Solar Cells
- B.2.1 Timeline
- **B.3 Photovoltaic Systems**
- B.4 Looking at the Balance of System (BOS)
- B.5 Analyzing the 3 Generations of Photovoltaic Cells
- B.5.1 First Generation PV Cells
- B.5.2 Second Generation PV Cells
- B.5.3 Third Generation PV Cells
- B.6 What are Concentrator Cells?
- **B.7** Applications of Solar Cells
- **B.7.1** Application Examples
- **B.8 Types of Solar Cells**
- **B.9** Photovoltaic Technology
- B.9.1 Solar Glazings and Laminates
- B.9.2 From Module to BIPV System
- B.9.3 Facade Integrated Modules
- **B.9.4 Roof Integrated Modules**
- B.9.5 Crystalline Silicon Technology
- B.9.6 Thin Film Technology
- B.9.7 Other Cell Types
- B.10 Solar Cell Materials Production and Features
 - B.10.1 Silicon
- B.10.2 Polycrystalline Silicon Production
- B.10.3 Mono-crystalline Silicon Production
- B.11 PV Technology in Isolated Generation

C. ECONOMICS OF PHOTOVOLTAICS

- C.1 Overview
- C.2 Investment Costs
- C.3 Electricity Price Towards Grid Parity
- C.4 Feed-In Tariffs



D. ENVIRONMENTAL AND HEALTH IMPACTS OF PHOTOVOLTAIC TECHNOLOGIES

D.1 Overview

D.2 Greenhouse Gas Emissions & Environmental Impacts

E. PHOTOVOLTAIC STANDARDS

- E.1 Terminology
- E.2 Standards Referring to Solar Cells and Modules
- E.3 PV Measurements
- E.4 Standards for Photovoltaic Systems
- E.5 Standards for Other Parts/Components of Photovoltaic Systems
- E.6 ASTM Standards
- E.7 UL Standards

F. LOOKING AT INDUSTRY TRENDS

- F.1 Market Overview
- F.2 Present-day Photovoltaic Industry
- F.3 Future Perspective
- F.4 Key Actions: 2010-2020
- F.5 Solar Resource and Regional Shares of Global PV Capacity
- F.6 Large-scale Photovoltaic Power Plants

G. COUNTRY TRENDS

- G.1 Australia
- G.2 Austria
- G.3 Canada
- G.4 Japan
- G.5 Korea
- G.6 Malaysia
- G.7 Mexico
- G.8 United Kingdom
- G.9 China
- G.10 India
- G.11 European Union



G.12 United States of America

H. APPENDIX

H.1 Manufacturers of Solar Photovoltaics

H.2 Figures & Tables

I. GLOSSARY OF TERMS



I would like to order

Product name: Trends in the Global Solar Photovoltaics Industry

Product link: https://marketpublishers.com/r/T60696060FFEN.html

Price: US\$ 450.00 (Single User License / Electronic Delivery) If you want to order Corporate License or Hard Copy, please, contact our Customer Service: <u>info@marketpublishers.com</u>

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <u>https://marketpublishers.com/r/T60696060FFEN.html</u>