

# **Growth Opportunities in Solar Photovoltaic Market 2011-2016: Trends, Forecasts and Market Share Analysis, January 2012**

<https://marketpublishers.com/r/G39C7D79518EN.html>

Date: January 2012

Pages: 132

Price: US\$ 4,850.00 (Single User License)

ID: G39C7D79518EN

## **Abstracts**

### **Background:**

In calendar year 2010, total worldwide solar photovoltaic (PV) system installations topped 16,568 MW with a value of US \$75 billion. The market is anticipated to grow to 33,600 MW in 2016 with a 14% CAGR over the next five years. The cumulative installation is expected to reach 190,800 MW by the end of 2016, with a value of approximately US \$105 billion representing a CAGR of 28% during 2011–2016.

Lucintel, a leading global management consulting and market research firm analyzed the solar PV industry and present its findings in the report, “Growth Opportunities in Solar Photovoltaic Market 2011-2016: Trends, Forecasts and Market Share Analysis.”

Lucintel’s research indicates that the growing inclination toward renewable energy to reduce carbon emissions is boosting solar energy across the globe. During 2011–2016, the North American and Asia-Pacific (APAC) markets for solar PV are expected to grow significantly. Accordingly, the overall share of North America and APAC in annual PV installation is likely to increase in the coming years.

Based on revised forecasts for solar PV, China is expected to be the global leader in annual solar PV installation by 2016. Solar PV capacity installation is also likely to grow significantly in the US during 2011–2016. The annual installation of solar PV in the US is forecast to surpass Germany by 2016 securing the second position globally, behind only China. Europe installed the largest amount of solar photovoltaic capacity in 2010, an estimated 79% of global annual installation for the year.

In this research report, Lucintel provides trend scenarios and forecast statistics for 2011–2016; details the industry’s drivers and challenges; manufacturing capacity for each node in the value chain of the solar PV industry; expansion plans; competitive analysis for solar PV; and installation of solar PV projects during 2011–2016; the report also details forecast for solar PV installation for all four global geographies—APAC, Europe, North America, and the Rest of the World.

This unique report from Lucintel can provide valuable information, insights, and tools needed to identify new growth opportunities and operate successfully in this market. This report could save hundreds of hours of your own personal research time and is likely to significantly benefit you in expanding your business in this market. In today’s unsettled economy, you need every advantage that you can find to keep ahead in your business.

### **Features of This Report:**

To make business, investment, or strategic decisions, you need timely and adequate information. This market report fulfills this core need and is an indispensable reference guide for multi-national materials suppliers, product manufacturers, investors, executives, distributors and others who are operating in this market.

Some of the features of “Growth Opportunities in Solar Photovoltaic Market 2011-2016: Trends, Forecasts and Market Share Analysis” include the following:

Major applications of solar PV systems

Value chain analysis for solar PV

Market size of solar PV by volume shipment

Key drivers and challenges for the growth of solar PV market

Levelized Cost of Energy (LCOE) for various energy sources in terms of \$/MWh

Trend and forecast of solar PV system in terms of installations

**Benefits of a Lucintel Report** Lucintel’s core competency is in market research and management consulting. Over the last 12 years, Lucintel has worked on hundreds of

market research studies. Lucintel's market reports offer the following benefits:

It saves your money, as compared to doing research in-house. (\$50,000+)

It saves your time. Lucintel delivers the report in hours vs. months of in-house data collection and report writing.

It is an unbiased source of industry facts, intelligence and insights.

It helps you make confident business decisions quickly.

**Who can Benefit from this Report?** This study is intended for material suppliers, parts fabricators, OEMs, investors, executives and consultants. This multi-client market study from Lucintel is used by small to multi-national Fortune 500 companies and utilized for a variety of reasons as follows.

Business development

Strategic planning

Business presentation

Determination of market size and trend

Competitive analysis

Personnel training

Budgeting

Investment decision

### **Research Methodology:**

Lucintel has closely tracked and conducted research on composites and other markets since 1998. This research project was designed for the purposes of determining the OEMs, Tier 1, and Tier 2 players as they may be able to identify the opportunity in

different global solar PV markets and their likely demand for solar PV systems and components in near future.

This study is a culmination of seven to eight months of full-time effort performed by Lucintel's analyst team. Our analysts used the following sources for the creation and completion of this valuable report:

In-depth secondary research and telephone interviews with more than 15 major OEM, Tier 1, and Tier 2 suppliers

In-depth secondary research from financial statements and annual reports of the competitors

Brief discussions with regional solar PV associations regarding the targets, policies, and expected developments in solar PV markets

Extensive search of current published literature, market and database information including industry news, company press releases, and customer intentions

A compilation of the experiences, judgments, and insights of Lucintel's professionals, who have analyzed and tracked composites and the solar PV market over the years.

## Contents

### **1. EXECUTIVE SUMMARY**

### **2. SOLAR PHOTOVOLTAIC INDUSTRY BACKGROUND AND CLASSIFICATIONS**

- 2.1: Introduction to solar photovoltaic
  - 2.1.1: What is solar photovoltaic (solar pv)?
  - 2.1.2: Development of solar photovoltaics
  - 2.1.3: Working of solar photovoltaic
  - 2.1.4: Major applications of solar photovoltaic systems
  - 2.1.5: Types of solar pv technologies
- 2.2: Types of solar pv installations
- 2.3: Advantages of solar energy
- 2.4: Disadvantages of solar energy
- 2.5: Cost comparison of solar PV with other energy sources
- 2.6: Value chain analysis for solar photovoltaic

### **3. GLOBAL SOLAR PV MARKET ANALYSIS 2010**

- 3.1: Total electric generation capacity worldwide–2010
- 3.2: Status of solar photovoltaic in total electricity market
- 3.3: Current market analysis by solar pv installation
  - 3.3.1: German solar pv market analysis
  - 3.3.2: Italian solar PV market analysis
  - 3.3.3: Czech Republican solar pv market analysis
  - 3.3.4: US solar pv market analysis
  - 3.3.5: Japan solar pv market analysis
- 3.4: Current market analysis by manufacturers
  - 3.4.1: Market leaders in solar pv module market
  - 3.4.2: Market leaders in solar pv inverter market
  - 3.4.3: Market leaders in polysilicon market
  - 3.4.4: Market leaders in solar pv cell/module manufacturing capacity

### **4. SOLAR PHOTOVOLTAIC MARKET TREND 2005–2010**

- 4.1: Trend of global solar photovoltaic installation
- 4.2: Trend of solar pv Installation in Germany
- 4.3: Trend of solar photovoltaic installation in Italy

- 4.4: Trend of solar photovoltaic installation in Czech Republic
- 4.5: Trend of solar photovoltaic installation in US
- 4.6: Drivers and challenges for solar photovoltaic
  - 4.6.1: Key drivers for the growth of solar photovoltaic market
  - 4.6.2: Key challenges for the growth of solar photovoltaic market

## **5. SOLAR PV MARKET FORECAST 2011–2016**

- 5.1: Forecast of solar pv installation globally during 2011 –2016
- 5.2: Forecast of solar pv installation by region during 2011 –2016
- 5.3; Forecast of solar pv installation by country during 2011 –2016
  - 5.3.1: Forecast of solar pv installation in Germany (2011–2016)
  - 5.3.2: Forecast of solar pv installation in Italy (2011–2016)
  - 5.3.3: Forecast of solar pv installation in US (2011–2016)
  - 5.3.4: Forecast of solar pv installation in Japan (2011–2016)
  - 5.3.5: Forecast of solar pv installation in China (2011–2016)

## **6. EMERGING TRENDS AND GROWTH OPPORTUNITIES IN SOLAR PV MARKET**

- 6.1: Emerging trends in solar photovoltaic market
- 6.2: Growth matrix of solar pv market

## List Of Figures

### LIST OF FIGURES

#### CHAPTER 1. EXECUTIVE SUMMARY

Figure 1.1: Porter's Five Forces model for solar pv cell/module manufacturing industry

#### CHAPTER 2. SOLAR PHOTOVOLTAIC INDUSTRY BACKGROUND AND CLASSIFICATIONS

Figure 2.1: Nellis solar power plant at Nellis Air Force base in the US

Figure 2.2: Photovoltaic system "tree" in Styria, Austria

Figure 2.3: Basic solar cell construction

Figure 2.4: Photovoltaic cells, modules, and arrays

Figure 2.5: Solar parking pay station

Figure 2.6: Monocrystalline pv module

Figure 2.7: Polycrystalline pv module

Figure 2.8: Amorphous silicon PV panel

Figure 2.9: Hybrid pv module

Figure 2.10: Pole-mount pv system

Figure 2.11: Ground-mount pv system

Figure 2.12: Pitched roof mount

Figure 2.13: Fin-mount pv system

Figure 2.14: Levelized cost of energy for various sources

Figure 2.15: Average electricity generation by a 1 MW solar pv project at 22% capacity factor over 25 years

Figure 2.16: O&M cost for a 1 MW solar pv project

Figure 2.17: Manufacturing process of c-Si pv systems

Figure 2.18: Manufacturing process of thin-film pv systems

#### CHAPTER 3 GLOBAL SOLAR PV MARKET ANALYSIS 2010

Figure 3.1: Regional cumulative electric generation capacities in GW –2010

Figure 3.2: APAC cumulative electric generation capacity by source at the end of 2010

Figure 3.3: NA cumulative electric generation capacity by source at the end of 2010

Figure 3.4: Europe cumulative electric generation capacity by source at the end of 2010

Figure 3.5: ROW cumulative electric generation capacity by source at the end of 2010

Figure 3.6: Global cumulative electric generation capacities by sources at the end of 2010

Figure 3.7: Regional breakdown of annual solar pv installation in 2010

Figure 3.8: Breakdown of solar pv installed by country in 2010

Figure 3.9: Reductions in FITs for solar pv systems in Germany

Figure 3.10: Monthly installations of solar pv in Germany in 2010 (MWp)

- Figure 3.11: Annual solar pv installations in Germany by system sizes – 2010
- Figure 3.12: Breakdown of annual installation of solar pv in Italy by system sizes – 2010
- Figure 3.13: Share of solar pv capacity in total electricity generation capacities in Czech Republic (2010)
- Figure 3.14: Reductions in FITs for solar pv in Czech Republic – 2011
- Figure 3.15: Reductions in green bonus for solar pv in Czech Republic – 2011
- Figure 3.16: FITs for solar pv generated electricity in Japan (Nov. 2009–Apr. 2011)
- Figure 3.17: Quarterly installations of solar pv in Japan for 2010
- Figure 3.18: Split of annual solar pv installation in Japan by application – 2010
- Figure 3.19: Annual market share of solar pv module manufacturers – 2010
- Figure 3.20: Annual market share of solar pv inverter manufacturers in terms of MW shipments
- Figure 3.21: Annual share of polysilicon manufacturing capacity – 2010
- Figure 3.22: Top 10 PV cell/module manufacturers based on manufacturing capacity – 2010
- Figure 3.23: Investment in pv cell/module manufacturing capacities geographically
- Figure 3.24: Solar pv cell manufacturing capacities of leading players (2009–2011)
- Figure 3.25: Solar pv module manufacturing capacities of leading players (2009–2011)
- CHAPTER 4 SOLAR PHOTOVOLTAIC MARKET TREND 2005–2010**
- Figure 4.1: Annual installation of solar pv globally during 2005–2010 (MW)
- Figure 4.2: Cumulative installation of solar pv globally during 2005–2010 (MW)
- Figure 4.3: Trend of annual installation of solar pv in Germany during 2005–2010 (MW)
- Figure 4.4: Proportions of solar pv capacity additions in net annual electric capacity additions in Germany (2005–2010)
- Figure 4.5: Trend of cumulative installation of solar pv in Germany during 2005–2010 (MW)
- Figure 4.6: Trend of annual installation of solar pv in Italy during 2005–2010 (MW)
- Figure 4.7: Proportions of solar pv capacity additions in net annual electric capacity additions in Italy (2005–2010)
- Figure 4.8: Trend of cumulative installation of solar pv in Italy during 2005–2010 (MW)
- Figure 4.9: Trend of annual installation of solar pv in Czech Republic during 2005–2010 (MW)
- Figure 4.10: Proportions of solar pv capacity additions in net annual electric capacity additions in Czech Republic (2005–2010)
- Figure 4.11: Trend of cumulative installation of solar pv in Czech Republic during 2005–2010 (MW)
- Figure 4.12: Trend of annual installation of solar pv in Japan during 2005–2010 (MW)
- Figure 4.13: Proportions of solar pv capacity additions in net annual electric capacity additions in Japan (2005–2010)



Figure 4.14: Trend of cumulative installation of solar pv in Japan during 2005–2010 (MW)

Figure 4.15: Trend of annual installation of solar pv in US during 2005–2010 (MW)

Figure 4.16: Proportions of solar pv capacity additions in net annual electric capacity additions in the US (2005–2010)

Figure 4.17: Trend of cumulative solar v installation in the US during 2005–2010 (MW)

Figure 4.18: Drivers and challenges for solar pv market development

## CHAPTER 5 SOLAR PV MARKET FORECAST 2011–2016

Figure 5.1: Forecast for annual solar pv installation globally during 2011–2016

Figure 5.2: Forecast for cumulative installation of solar pv globally during 2011–2016

Figure 5.3: Forecast for annual solar pv installation by geographic region (2011–2016)

Figure 5.4: Share of Europe in annual solar pv installation globally (2011–2016)

Figure 5.5: Share of NA in annual solar pv installation globally (2011–2016)

Figure 5.6: Share of APAC in annual solar pv installation globally (2011–2016)

Figure 5.7: Share of ROW in annual solar pv installation globally (2011–2016)

Figure 5.8: Forecast of annual solar pv installation in Germany during 2011–2016

Figure 5.9: Forecast of cumulative solar pv installation in Germany during 2011–2016

Figure 5.10: Forecast of solar pv annual installation in Italy during 2011–2016

Figure 5.11: Forecast of cumulative installation of solar PV in Italy during 2011–2016

Figure 5.12: Forecast of annual solar pv installation in US during 2011–2016

Figure 5.13: Forecast of cumulative solar pv installation in US during 2011–2016

Figure 5.14: Forecast of annual solar pv installation in Japan during 2011–2016

Figure 5.15: Forecast of cumulative solar pv capacity installation in Japan during 2011–2016

Figure 5.16: Forecast of annual solar pv installation in China during 2011–2016

Figure 5.17: Forecast of cumulative solar pv installation in China during 2011–2016

## CHAPTER 6 EMERGING TRENDS AND GROWTH OPPORTUNITIES IN SOLAR PV MARKET

Figure 6.1: Emerging trends in solar pv market

Figure 6.2: Growth matrix for solar pv market in Germany, Italy, Japan, US, and China (2016)

## List Of Tables

### LIST OF TABLES

Table 1.1: Global solar pv market parameters and attributes

Table 2.1: Vertical integration analysis of the leading players in PV manufacturing

Table 3.1: Feed-in premiums per KWh (in US \$) for rooftop solar PV systems in Italy, June 2011–December 2012

Table 3.2: Feed-in premiums per KWh (in US \$) for ground-mounted solar PV systems in Italy June 2011–December 2012

Table 3.3: Budget cap for large pv plants June 2011–December 2012

Table 3.4: FITs for solar pv systems in Italy January 2013–June 2013 in US \$ per KWh

Table 3.5: Degressions in FITs for solar pv systems in Italy July 2013–July 2016

Table 3.6: Budget cap for solar pv plants during 2013–2016 in Italy

Table 3.7: Presence of RPS, goals, set-asides, and credit multipliers in various states in US

Table 4.1: FITs for solar pv in Italy during 2010

Table 4.2: FITs for solar pv in Czech Republic during 2010

Table 4.3: FITs for solar pv in Japan

Table 5.1: German solar pv degression for 2012

## I would like to order

Product name: Growth Opportunities in Solar Photovoltaic Market 2011-2016: Trends, Forecasts and Market Share Analysis, January 2012

Product link: <https://marketpublishers.com/r/G39C7D79518EN.html>

Price: US\$ 4,850.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/G39C7D79518EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970

