



# Global and China Photovoltaic Glass Industry Report, 2016-2020

Jun. 2016

## **STUDY GOAL AND OBJECTIVES**

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

## **REPORT OBJECTIVES**

- ◆ To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- ◆ To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- ◆ To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- ◆ To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- ◆ To help company to succeed in a competitive market, and

## **METHODOLOGY**

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications. Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

## **INFORMATION SOURCES**

The primary information sources include Company Reports, and National Bureau of Statistics of China etc.

## Abstract

Photovoltaic glass (PV glass) is directly used for solar PV power generation and solar thermal power generation system components and plays a role in transmission and sunlight control, or conduction. It mainly includes ultra-clear patterned glass, TCO glass and PV anti-reflective glass.

The global PV industry has developed steadily in recent years. In 2010-2015, the global cumulative PV installed capacity registered a CAGR of 41.6%, which brought rapid growth of PV glass consumption. In 2015, the global PV glass consumption attained 580 million square meters, up 44.4% year on year. The CAGR is expected to stay above 20% in 2016-2020.

China as the world's largest PV glass producer accounts for roughly 75% of total capacity. In 2015, China produced 310 million square meters of PV glass, up 14.1% year on year. The output is expected to reach 350 million square meters in 2016 and exceed 500 million square meters in 2020.

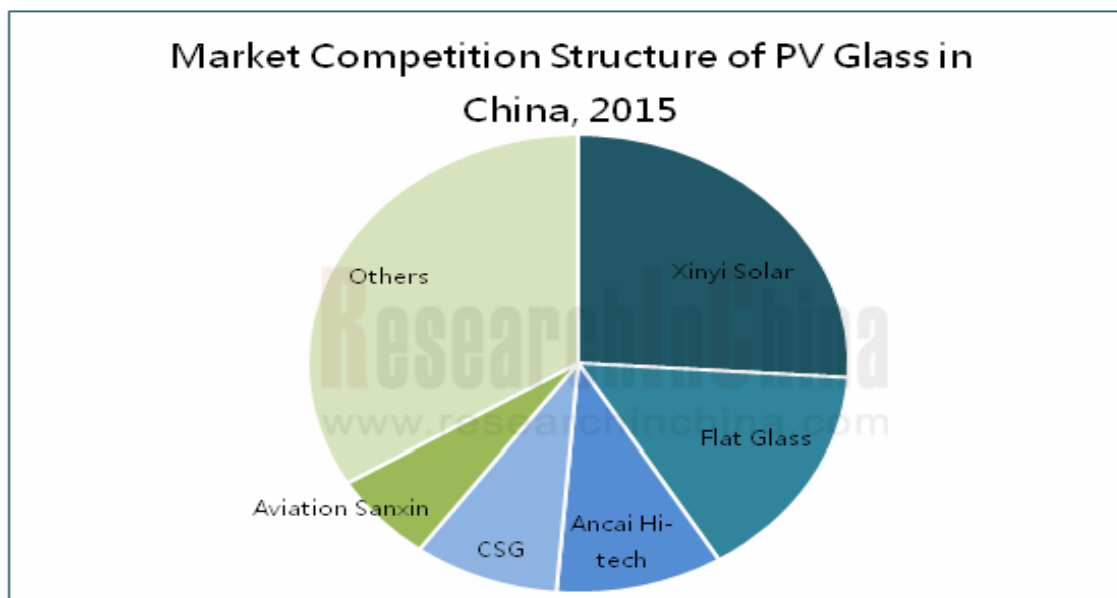
The Chinese PV glass market enjoys a high concentration ratio, with CR5 of 66.3% in 2015. Among them, Xinyi Solar Holding Ltd. occupied the first place with a 26% share. In the future, following the capacity expansion of major PV glass manufacturers, the market concentration will be further improved.

Xinyi Solar upgraded a 500 t/d PV raw glass production line to 600 t/d in 2015. In 2016, it is engaged in building a 900 t/d solar glass production line in Malaysia; two 1 kt/d solar glass production lines in Anhui Province, which are planned to go into operation in Q4 2016 and Q1 2017 respectively.

In December 2015, Flat Glass Group invested roughly RMB550 million in the construction of a PV glass manufacturing base in Vietnam, mainly offering services to Southeast Asian, Indian, European, South Korean and Japanese customers. The factory is designed to have an annual capacity of 27 million square meters.

In October 2015, China Glass Holdings Limited and Magnificent Vision Group co-invested RMB1.3 billion in building a solar PV glass production line (1 kt/d) in Yumen City.

In May 2016, the 650 t/d ultra-clear high-transmittance PV glass production line of CNBM (Hefei) New Energy Co., Ltd. was completed and put into production. This marked a full success of the biggest oxygen-fuel combustion ultra-clear high-transmittance PV glass production line construction in China. As the project starts to run formally, 24 million square meters of raw sheets and 18 million square meters of coated sheets will be produced each year.



The report highlights the following:

- Development environment, market size, etc. of global PV glass;
- Policy environment, market size, import & export, market price, etc. of Chinese PV glass industry;
- Overview, scale, competition pattern, etc. of major PV glass market segments (ultra-clear patterned glass, TCO glass, PV anti-reflective glass);
- Overview, market size, market structure, competition pattern, etc. of main upstream sectors (silicon dioxide, sodium carbonate, limestone, aluminum oxide) and downstream application (solar cell module) of PV glass;
- Operation, layout in China, revenue structure, PV glass business of 5 global and 18 Chinese PV glass companies.

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