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China Solar Polysilicon Industry Report, 2009

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1.3 Industry Environment

With the development of PV industry, the demand for polycrystalline silicon has become more and more. In addition, along with the output expansion plan of main global manufacturers, the contradiction between supply and demand will be gradually weak.

China Solar Installed Capacity and Generating Capacity Plan, 2004-2050

Industry Plan	2004	2010E	2020E	2030E	2050E
Installed Capacity	---	300,000 KWp	---	---	---
Annual Generating Amount	---	---	2.16 bn KWH	---	---
Generating Ratio	---	---	---	14.60%	---

Source: National Development and Reform Commission

China's Solar Energy Utilization Schedule, 2006-2020

	Middle and Long-term Plan of Renewable Energy (Agu.2007)			The 11th Five-Year Plan of Renewable Energy (Mar.2008)		
	Accumulative Installed Capacity			2006-2010		
	2010	2020	Newly-added Investment (RMB)	Newly-added Installed Capacity	Accumulative Capacity	CAGR
Hydropower	190 GW	---	---	73 GW	---	1
Biological Mass Energy	---	---	200 billion	---	---	
Wind Power	5 GW	---	---	---	---	58.49%
Solar Energy	---	1.8 GW	---	---	300,000 KW	---
Total	200.8 GW	---	---	---	---	---

Source: National Development and Reform Commission

1.4 Overview of China's Polysilicon Industry

The world's solar cell output increased 40% yearly on average over the past decade. Promoted by the global PV market, China's PV export value reached ****** in 2008, topping in the world. In addition, its PV output accounted for 30% of global total, and was the sum of Germany and Japan.

The global economic downturn has made PV industry stranded, and the ratio of output to demand was 2:1. In 1H 2009, the output value of world's PV industry dropped nearly 40%, while the advantages such as low cost made China's PV market share rise to 40%.

In China, more than ten startups have successfully went public via PV market development, as well as many listed companies have entered the PV market, all of which had developed rapidly during several years before 2008, and their output capacity had been successively expanded.

Seen from the latest situation, some problems such as blind investment and overcapacity have occurred in the development course of China's polysilicon industry.

Firstly, overcapacity in total output scale.

Lured by high profit in previous years, huge capital has flowed into polysilicon industry since 2006, which resulted in rapid expansion of polysilicon output capacity. According to the statistics, the polysilicon output capacity hit approximately ******tons in China in 2008, and the output was ****** tons, while the production capacity under construction was over ****** tons, indicating evident overcapacity. Meanwhile, being an energy-intensive industry, the electricity charges of polysilicon accounts for ******% in production cost. Currently, China's PV industry has not started up by large extent, and ******% of solar cells made with China-made polysilicon are for export, which means indirectly energy export in large quantity.

Secondly, unreasonable distribution

The polysilicon projects should be established in the areas with rich energy and low-price electricity considering its electricity guzzling. However, a substantial part of new construction projects are built in East China and Central China, the areas with high electricity price and short of energy resources.

In Sep, 2009, China's central government listed polysilicon as an overcapacity industry in order to guide its healthy development, avoid excessive competition and achieve energy-saving and emission reduction. It was explicitly proposed to strictly supervise industrial market access, strengthen environmental monitoring and project approvals, and implement the accountability system. In the meantime, it was planned to resolutely curb polysilicon overcapacity and redundant construction by rendering the economic and administrative means.

China's Accumulative PV Installed Capacity, Annual Installed Capacity and Growth Rate, 2000-2009

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Source: www.wind.com.cn

2.3 Solar Cell Module Market

With the rapid development of solar cell industry, components industry will be faster. The first solar cell components bloc led by Japan, Germany and the United States will take the lead, and the total output of they four will determine the world's component industry layout.

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Currently, China has many solar cell component manufacturers, and the following table is to show China's main cell component manufacturers and market shares.

China's Main Solar Component Manufacturers and Market Shares

Company	Output Capacity /MWP	Market Share
******	******	******
******	******	******
******	******	******
******	******	******
******	******	******
Ningbo Solar Electric Power Co., Ltd	******	******
BP Jia Solar Energy Co., Ltd	******	******
Shanghai Yaojiang Solar Energy Technology Co., Ltd	******	******
Changzhou Trina Solar Energy Co., Ltd	******	******
Wuxi Shangpin Solar Power Technology Co., Ltd	******	******
Shenzhen Topray Solar Co., Ltd	******	******
******	******	******
******	******	******
******	******	******
******	******	******

Source: ResearchInChina

4.1 Suntech Power Holdings

Product category: polysilicon cell, thin-film cell, and modules

Main customers: Germany 60%, other European area 20%, USA and China 20%

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After experiencing low point in 2008, the operation status of Suntech turned good in 2009. In the second quarter of 2009, it made business revenue of USD321 million, up 1.7% month-on-month, but down 33.16% yr-on-yr. Deducted net business revenue decrease of subsidiary—GSF, the net business revenue increased by 42.05% month-on-month. The net profit was USD10 million, up more than five times month-on-month, but down 80.91% yr-on-yr.

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Therefore, SUntech adjusted its full-year shipment expectation to be about 600MW, and the PV capacity in 2009 kept at 1GW. It was estimated the capital expenditure in 2009 would be USD100-120 million.

Suntech realizes its revenue growth by many ways. Firstly, its offensive silicon materials purchasing and cell/modules production ability ensures its capacity growth to 1000 MW IN 2010. Secondly, its product price is still rising. Thirdly, Suntech strives to lower cost through higher conversion efficiency, thinner silicon wafer and higher output.

On July 14, 2009, Suntech signed strategic cooperation agreements with Provincial Government of Shaanxi, Qinghai, Municipal Government of Ningxia Shizuishan, and Sichuan Panzhihua to develop 300MW and 500MW grid-connected solar PV projects in above four areas with total investment of RMB30 billion and total capacity of 1,800MW.

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→ Related Reports

- **Solar Cell (Photovoltaic) Equipment Industry Report, 2009**
  http://www.researchinchina.com/htmls/Report/2009/5790.html
- **China Nuclear Power Industry Report, 2009**
  http://www.researchinchina.com/htmls/Report/2009/5774.html
- **China Clean Energy Industry Report, 2008-2009**
  http://www.researchinchina.com/htmls/Report/2009/5713.html
- **Global and China Wind Power Industry Report, 2008-2009**
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- **China Power Transmission and Distribution Equipment Industry Report, 2008-2009**
  http://www.researchinchina.com/htmls/Report/2009/5666.html
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  http://www.researchinchina.com/htmls/Report/2009/5642.html
- **China Solar Water Heater Market Report 2008**
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- **China Thin-Film Solar Cell Market Report, 2008**
  http://www.researchinchina.com/htmls/Report/2009/5639.html
- **China Heating Radiator Market Report, 2007-2008**
  http://www.researchinchina.com/Htmls/Report/2008/5167.html

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