

# 2007-2008 年太阳能 多晶硅行业研究报告

Solar Polysilicon Industry Report, 2007-2008

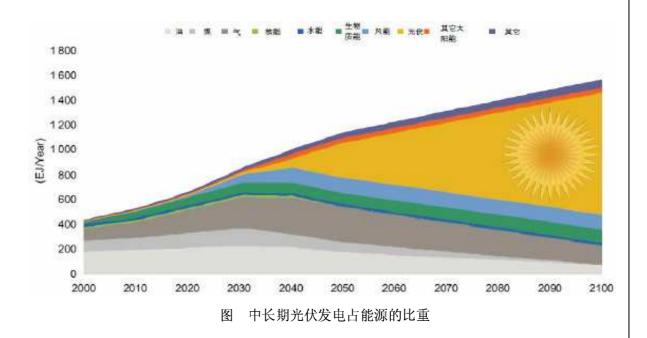
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## 摘要

在当今能源日趋紧张、环境压力日趋增大的情况下,可再生能源受到各国政府的日益重视,太阳能作为一种重要的可再生能源,其开发和利用已成为各国可持续发展战略的重要组成部分。预计未来 太阳能能源将在人类能源总量中占据更加重要的位置。



光伏发电产业得到了各国政府特别是欧洲政府的大力支持,太阳能电池的需求量也在高速增长。目前,全球太阳能电池市场供不应求,在国际大环境的影响下,全球市场需求增长,带动了中国太阳能光伏行业高速发展。

太阳能电池的高速发展,导致多晶硅原材料的供应紧张,大多数太阳能电池企业不能满负荷运转,其 达产率仅有 30%~40%。在这种情况下,多晶硅材料的售价陡然升高,多晶硅不正常的"暴利"局面 也极大地刺激了国内企业的投资和扩产的积极性。由于光伏产业对多晶硅的需求猛增,但对多晶硅品 级的要求相对较低,技术门槛相对宽松,因此近年来已有多家公司上马多晶硅项目,而且吨位惊人。

面对多晶硅市场持续供不应求的局面,国际有基础优势的多晶硅生产企业确定发展计划,纷纷大规模扩产,同时也吸引了大量新建投资者并加速新技术工艺的产业化生产。国际上原有多晶硅生产厂商大规模扩产和新建项目产能释放,全球多晶硅供需失衡的局面将在 2009 年逐步得到缓解。预计到 2010 年后国际多晶硅市场价格也将随着产能增长而回落,市场竞争将日趋激烈,技术与成本的竞争将是决定企业成败的关键。

世界多晶硅主要生产国家正在积极寻求新工艺、新设备和新技术,国内在多晶硅技术方面存在着很多不足。在国内光伏市场迟迟未能启动,在国内多晶硅非理性的投资热潮、低水平重复建设下暗藏着行业系统风险。从企业个体角度来讲,由于多晶硅巨大的前期投资和复杂的系统技术使得行业门槛较高,



一般都是大型企业共同投资和多样化经营以分散风险,而实行单一经营或者技术不成熟的企业应该引 起投资者的警惕。

从地域角度来讲,四川可能成为中国多晶硅的最重要的产地,另外江西、辽宁等省投资较大。

本报告对国内外多晶硅行业的发展状况进行了深入透彻地分析,对中国多晶硅行业市场情况、技术现 状、供需形势作了详尽分析,重点分析了国内外重点生产企业以及行业投资,是多晶硅及相关制造企 业、投资部门、研究机构准确了解目前中国多晶硅市场状况的重要参考资料。

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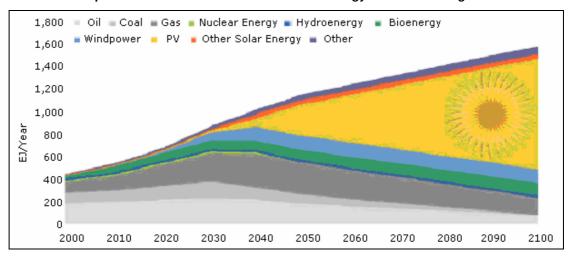
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#### Abstract

Nowadays, governments of various countries, under the pressure of increasingly tensed energy supply and intensified environment protection, are paying more and more attention to renewable energy. Solar energy is known as an important renewable energy and its exploration and utilization have become a fundamental part of sustainable development strategy. In the future, solar energy is expected to take a much more important position in all energies used by human beings.

#### Proportion of PV Power Generation to Total Energy in Mid- and Long-Term



Photovoltaic power generation industry has been backed by various countries, and especially it has got great





support from the European countries. Solar cell demand in the world is growing rapidly, so currently solar cell supply falls short of demand in the global market. Boosted by the international environment, solar cell demand in the global market also keeps rising, which has given an impetus to the rapid development of China's solar photovoltaic industry.

The rapid development of solar cell has lead to a tight raw material supply of polysilicon. Most solar cell companies can not run at full capacity, with their operation rates reaching only 30% to 40%. Under such a condition, polysilicon price has skyrocketed. The abnormal "profiteering" of polysilicon producers has greatly stimulated domestic companies to expand their production capacity or invest in such projects. A surge in PV industry demand for polysilicon, a relatively low requirement for low-end polysilicon products and a relaxed technology threshold have also stimulated many companies to pour huge sum of money into polysilicon projects with amazing production capacity.

Under the condition of a continuously tight supply of polysilicon, some international polysilicon giants have worked out plans to vigorously expand production capacity successively. Meanwhile, a great number of investors have lured to polysilicon production, which has picked up the pace of integrating new processing techniques with large-scale production.

Demand-supply imbalance in the global polysilicon market will be eased off in 2009, with new projects and capacity expansion projects put into operation successively. It is forecast that after 2010, polysilicon price in international market will fall, following a rise in production capacity, which will lead to an increasingly fiercer competition. Competition of processing technique and production cost will be the key factors deciding the fate of companies.

Main international polysilicon giants in the world are now actively seeking for new technology, new processing techniques and new equipments. Chinese producers still lag behind them in both technology and processing techniques. Under the circumstances that China's PV market has not started yet and domestic investment in the industry has become irrational, there exist potential risks in the industry with low-level redundant construction. In China, several large companies adopt the cooperation strategy in the investment in polysilicon projects and regard such investment as diversified business to spread their risks. From the perspective of investors, they should be vigilant in investing in companies with polysilicon production as the sole business and the introduction of immature technology.

From the perspective of geography, Sichuan province in the southwest part of China is most likely to become the most important polysilicon production base in China, followed by Jiangxi province in the south part of China and Liaoning province in the northeast part of China.

This report makes an in-depth analysis of the development of polysilicon industry both at home and abroad and makes a profound study on market, processing techniques, supply and demand of China's polysilicon industry. The report also provides you with the valuable information on key polysilicon producers and investment in the industry at home and abroad. We believe that the report is an important reference for polysilicon producers, investors, research institutes to get a good understanding of China's plysilicon industry.

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