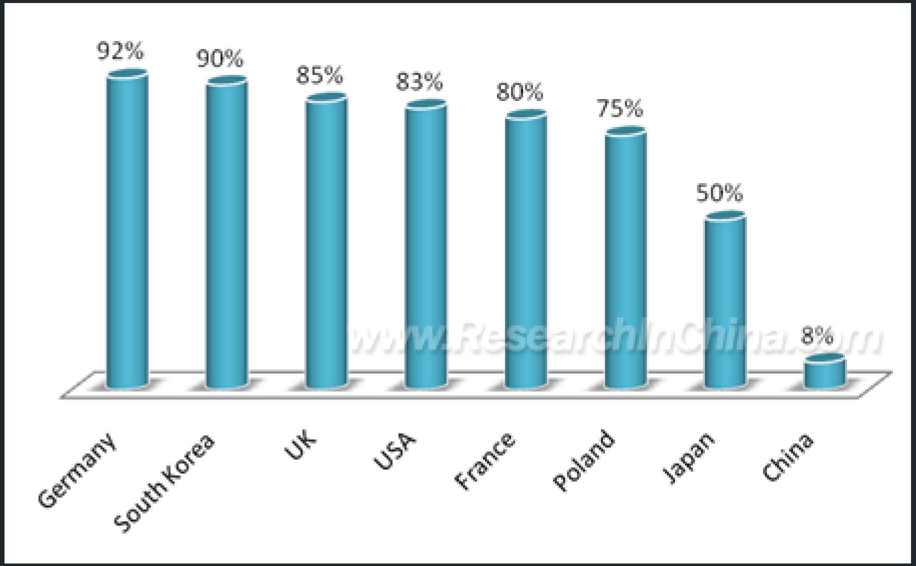
# Global and China Low-E Glass Industry Report, 2010

Based on a comprehensive analysis of energy consumption in the aftermath of the energy crisis in 1970s, it has become a global consensus that buildings account for a significant proportion of energy consumption, and standards as well as laws and regulations for the implementation of such standards should be formulated for the energy saving of buildings. As a result, governments worldwide have successively established their own energy-efficient standards for buildings, and implemented a variety of policies to promote energy-efficient building materials, which has greatly boosted the application of low emissivity (Low-E) glass. The sales of Low-E glass worldwide grew rapidly during 1990-2005, and exceeded 250 million m2 in 2005, with a CAGR of around 18%.

Currently, Low-E glass is widely applied in developed countries. The utilization rate of Low-E glass is 92% in Germany, 90% in South Korea and 75% in Poland. While in China, the penetration rate of energy-efficient glass is only 10%, and the Low-E glass' 8%. Therefore, China will have a large space for the development of Low-E glass in the future, and will see rapid growth of Low-E glass in the coming years. It is projected that a total of 148 million m2 of Low-E glass will be applied in the public and residential buildings by 2012.

**Low-E Glass Penetration Rate in Major Countries, 2009**




Source: ResearchInChina

Besides analyzing the supply and demand of Low-E glass in China and worldwide, the report also delves into the four key global Low-E glass companies - PPG Industries, NSG, AGC and Saint-Gobain, as well as eleven key Chinese companies like CSG, TGI, Xinyi Glass and Yaohua Pilkington.

The Low-E glass production lines in China, mostly adopting offline process, are dominated by large companies such as CSG, Xinyi Glass and Yaohua Pilkington, and it is difficult for small companies to enter the industry. Taking CSG as an example, architectural glass business accounted for 25.98% of the company's total operating income in H1 2010, and is expected to continue to grow along with the Low-E glass projects successively put into production in 2010-2011.

**Investment Plan for CSG Architectural Glass Projects**

| Project | Investment (RMB10,000) | Progress |
|---|---|---|
| New Reflective Glass Production Line of Chengdu CSG | 24800 | With an annual capacity of 1.2 million m2, it is about to start trial production. |
| Expansion Project of Dongguan CSG Architectural Glass Co., Ltd | 47579 | With an annual capacity of 1.2 million m2 of reflective hollow glass and an annual capacity of 3 million m2 of reflective plate glass, the projects are expected to be put into production in Jul, 2011 and Mar, 2012 respectively. |
| Expansion Project of Wujiang CSG Huadong Architectural Glass Co., Ltd | 47913 | With an annual capacity of 1.2 million m2 of reflective hollow glass and an annual capacity of 3 million m2 of reflective plate glass, the projects are expected to be put into production in Jun and Dec, 2011 respectively. |
| Expansion Project of Chengdu CSG Glass Co., Ltd | 19835 | With an annual capacity of 3 million m2 of reflective plate glass, the project is expected to be put into production in Aug, 2011 |

Source: CSG, ResearchInChina

# Table of Contents

# Selected Charts

- Glass Categories
- Difference between Off-line and On-line Low-E Glasses
- Major Categories and Applicability of Low-E Glass
- Comparison of Heat Transfer Coefficient of Glass by Category
- Comparison of Energy- Efficient Effect of Glass by Category
- Low-E Glass Development in Foreign Countries
- Energy-Efficient Policies for Buildings in Germany
- Low-E Glass Consumption and Utilization Rate in Germany, 1990-1999
- Energy-Efficient Policies for Buildings in the United States
- Energy-Efficient Policies for Buildings in Japan
- Low-E Glass Sales & CAGR Worldwide, 1990-2005
- Low-E Glass Sales & CAGR in Europe, 1985-1996
- Energy-Efficient Glass Penetration Rate in Major Countries, 2009
- Low-E Glass Penetration Rate in Major Countries, 2009
- Foreign Low-E Glass Technologies and Major Manufacturers
- Comparison of Glass CO2 and SO2 Emissions by Category
- Yearly per Capita Housing Expenditure of Urban Household, 1995-2009
- Low-E Glass Manufacturing Cost Structure (Imported Equipment)
- China’s Major Low-E Glass Manufacturers and Capacities
- China’s Low-E Glass Production Lines Adopting Domestic-made Equipment
- China’s Actual Low-E Glass Capacity, 2008-2010
- Distribution of Actual Capacities of China’s Major Low-E Glass Manufacturers, 2009
- China’s Energy Consumption by Category
- Energy Consumption of Buildings in Northern China by Category

- Price Ratio of Low-E Glass to Clear Glass in China
- China’s Low-E Glass Demand, 2006-2012E
- PPG Glass Business Structure
- PPG Income & Net Profit, 2007-Q1-Q3 2010
- PPG Income Structure by Product, 2007-H1 2010
- PPG Income Structure by Region, 2006 vs. 2009
- Cooperation of PPG Low-E Glass Business in China
- NSG Operating Income by Region/Product, Q1-Q2 FY2011 (Apr 1-Sep 30, 2010)
- NSG Operating Income Structure by Region/Product, Q1-Q2 FY2011 (Apr 1-Sep 30, 2010)
- NSG Operating Profit by Region/Product, Q1-Q2 FY2011 (Apr 1-Sep 30, 2010)
- NSG Operating Income and Profit by Region, Q1-Q2 FY2010 vs. Q1-Q2 FY2011
- NSG Business Distribution in China
- Operating Income and Total Profit of Tianjin NSG Safety Glass, 2007-2008
- AGC Income and Operating Profit, 2009-Q2 2010
- AGC Income and Profit by Product, Q2 2009-Q2 2010
- AGC Flat Glass Classifications and Major Products
- AGC Glass Business Income & Operating Profit, 2009-Q2 2010
- AGC Glass Business Income by Region/Product, 2009-Q2 2010
- AGC Glass Business Income & Operating Profit, Q2 2009-Q2 2010
- Major Specialty Glass Companies of AGC China
- Operating Income and Total Profit of AGC Flat Glass (Dalian) Co., Ltd, 2007-2008
- Saint-Gobain Income & Net Profit, 2007-Q1-Q3 2010
- Saint-Gobain Income Structure by Product, 2009-Q1-Q3 2010
- Saint-Gobain Income Structure by Region, 2009-Q1-Q3 2010
- Income Ratio of Saint-Gobain in Europe, Latin America and Asia Pacific, 2009

- CAS Operating Profit by Product, 2004-H1 2010
- Architectural Glass Gross Margin Comparison among CAS, CSG and Xinyi Glass
- New Production Lines of CAS
- Grand Glass Operating Income & Total Profit, 2007-2008
- Huadong Coating Glass Operating Income & Total Profit, 2007-2008

# How to Buy

| Product details | | | How to Order |
|---|---|---|---|
| | USD | File | By email: report@researchinchina.com |
| Single user | 1,700 | PDF | By fax: 86-10-82601570 |
| Enterprisewide | 2,500 | PDF | By online: www.researchinchina.com |
| Publication date: Nov. 2010 | | | |

For more information, call our office in Beijing, China:

Tel: 86-10-82600828

Website: www.researchinchina.com