



PRESS
release

October 11, 2010

Saint-Gobain accelerates its growth in the photovoltaic (PV) solar sector and sets up, with Hyundai Heavy Industries, a joint-venture in Korea

After launching the construction of a second Avancis plant in Germany (last June), Saint-Gobain has announced, in association with Hyundai Heavy Industries Co., Ltd.(HHI), the building of a third high-efficiency PV panels facility in Korea. This partnership between the two groups will take the form of a 50-50 joint-venture, called Hyundai Avancis. The first manufacturing facility for the joint-venture will be designed identically to the second Avancis plant currently under construction in Germany, both in manufacturing capacity and technology terms. In this way, it will produce an annual volume of 850,000 modules based on CIGS (Copper – Indium – Gallium – Selenide) thin-film technology, designed for roofs and solar fields. In other words, an annual power output of 100 MW, or the equivalent yearly energy requirements of a town with 15,000 inhabitants. The site should be operational from the 2nd quarter of 2012 and will supply the global market. Its modules will be marketed independently by Avancis and HHI.

Based on depositing coatings of CIGS on a glass substrate, the technology developed by Avancis avoids using traditional crystalline silicon. This technology makes it possible to imagine production costs as low as other thin-film based techniques, while its electrical efficiency (above 12% industrially and up to 20% in the laboratory) is close to the higher yields achieved using polycrystalline silicon cells. As well as being suitable for solar fields, CIGS thin-film based modules are especially recommended for roof installations, due to their simplicity of assembly, their attractive appearance and their reliability.

“With this investment, Saint-Gobain significantly accelerates its growth on the solar market, by banking on a competitive and innovative technology. This latest illustration of the Group’s commitment to renewable energies testifies to the growth potential of Avancis, the reference player on the high-efficiency thin-film PV modules market” states Pierre-André de Chalendar, Chairman and CEO of Compagnie de Saint-Gobain. “Already well located in Korea (particularly in Flat Glass where it has 4 float lines and several processing units for the automotive and building sectors), Saint-Gobain strengthens its position in this country in association with HHI, whose industrial and technological know-how is recognized worldwide” declares Jean-Pierre Floris, Senior Vice-President of Compagnie de Saint-Gobain and President of the Innovative Materials Sector.

“By expanding into the high-efficiency CIGS PV market, under a joint-venture with Saint-Gobain, HHI is on track with its plan to become a global supplier in the renewable energy sector via innovation and diversification. Above all, HHI will be one step closer to achieving the global commitment of pursuing an era of clean energy. We believe that we will soon fulfill these commitments that will provide a strong foundation for our future generations,” says Keh-Sik Min, Chairman of Hyundai Heavy Industries.

In 2010, the PV solar power market has grown tremendously and installed power worldwide is currently estimated at 30 GW, i.e. enough energy to meet the requirements of 5 million Western Europeans. This rise should continue at a steady pace over the years to come, enabling the sector to grow by relying less on public subsidies.

Saint-Gobain

Located in 64 countries with over 190,000 employees, Saint-Gobain, the world leader in the habitat and construction markets, designs, manufactures and distributes building materials, providing innovative solutions to meet growing demand in emerging and mature countries, for energy efficiency and for environmental protection. Saint-Gobain Solar combines all Saint-Gobain businesses in the solar sector. Present over the whole value chain, the Saint-Gobain Solar strategy hinges on three independent activities:

- *The manufacturing and sale of high-tech components for PV modules (special glass, high-performance plastics...) and high-performance mirrors for solar thermal plant operators.*
- *The production, through its Avancis company, of thin-film PV modules based on CIGS technology (Copper – Indium – Gallium - Selenide), designed for distributors, systems integrators and solar plant operators.*
- *The design and marketing of PV solutions for residential homes, office buildings, industrial and farm installations.*

Hyundai Heavy Industries

Hyundai Heavy Industries has maintained a leading position in the world shipbuilding market and is now a leading integrated heavy industries company with six business divisions: Shipbuilding, Offshore & Engineering, Industrial Plant & Engineering, Engine & Machinery, Electro-Electric Systems, and Construction Equipment.

HHI is one of the rare companies manufacturing both advanced Solar Power and Wind Turbine system products, making it stand out as a genuine and professional renewable energy company. HHI is South Korea’s sole company that is able to produce entire solar value chain products ranging from polysilicon, solar cell and solar module all the way to power conditioning systems. HHI is currently expanding facilities to increase annual production capacity of silicon solar cell and modules from 330MW to 600MW.

In August 2010, HHI won a USD 700 million contract to build a 175MW solar power plant from US based Matinee Energy.

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