

# Make Glass While Sun Shines

Solar energy business is giving rise to new frontiers as low iron glass industry becomes the big biz in Noida & Gr Noida

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The national solar mission initiated by the government of India to promote the country's energy needs and global challenges of climate change, is now showing its effect or contribution in the local development too. With aggressive promotion of solar power projects, an ancillary industry, the low-iron glass industry, is shaping up to become a big business for Noida & Greater-Noida region.

Low-iron glass is one of the major components along with crystalline silica or thin film and solar cells or batteries used in the production of the photovoltaic solar panel (PV Solar panel) or module which in turn is used to generate electricity from solar energy.

According to government estimates the demand for low-iron glass is expected to surge by over 80% over the next five years. "Due to the sufficient fall in the prices of solar photovoltaic modules, solar projects have become highly viable. Apart from the growing demand and competition, domestically manufactured low iron glass will for sure add to the commercial feasibility of solar projects in India," said VK Kaul, general manager, Central Electronic, a state-owned company.

The glass-industry in Noida region is primarily into glass-work (assembly type) or into manufacturing of solar-insulated or solar-control glasses or traders of imported glasses or thin-films from China, Germany, US et al.

Till date, almost every solar project developer has been importing such glasses and selling it either directly to national solar en-

ergy players like Moser Baer, Tata BP Solar, Lanco Solar and local players like MV Solar, Maharishi Solar Technologies or just selling it in the open market.

Keeping in mind the growing demand and numerous players entering the market, glass manufacturers at both national and local level have sensed a big business opportunity and are trying to change the entire dynamics.

Gujarat Borosil has started by becoming the first manufacturer of low-iron glass and other big players like Hindustan National Glass, Saint-Gobain are following the suit. Both these players have plans for setting up glass manufacturing plants in Noida and are very optimistic about this new niche glass industry developing. A senior official from Saint Gobain says, "We expect the requirement of glass for the solar industry to grow by 30% to 40% CAGR up to 2020."

As for the local players of the region, they are basically into trading of such glasses as imported items. But for sometime they have also been thinking of growing and diversifying into other areas of glass manufacturing.

Maharishi Solar Technologies, one of the prominent players in Greater Noida which has been into manufacturing of solar products for quite long, feels that it's the right time to invest in other diversifications. M N Goyal, vice-president, Maharishi Solar Technologies said, "We have been manufacturing solar wafers, a key ingredient for the PV panels. Now by putting our hands into low-iron glass too, we will be able to increase our value chain which will surely be a big business opportunity."

Adding to this is a prominent player in the

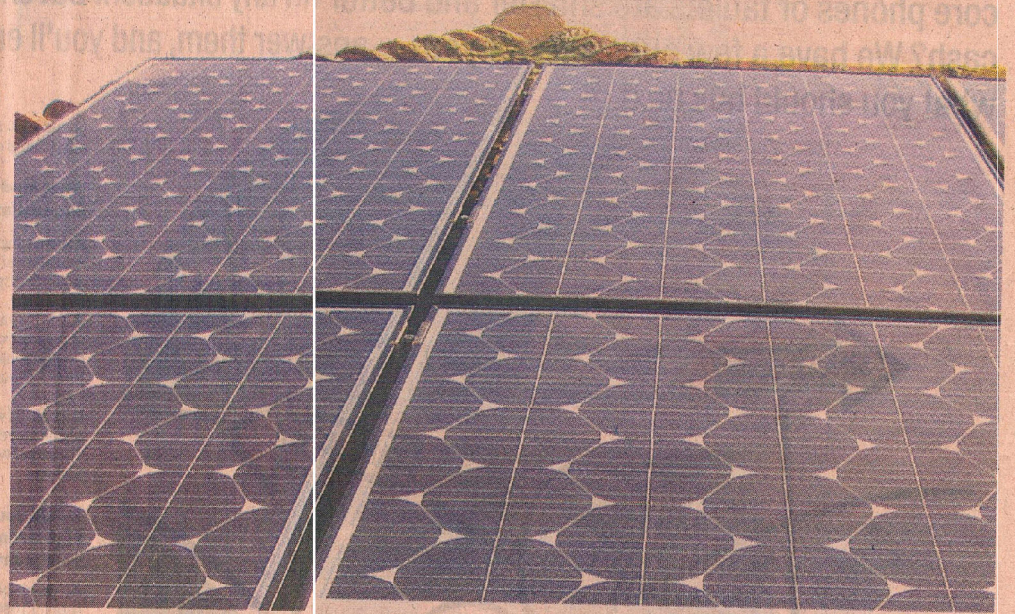
glass industry from Noida, Shree Balaji Glass Works. It has been into the glass business for decades and specialises in solar control glass and heat-strengthened glass. The glass manufacturer is soon going to start manufacturing of low-iron glass and feel that being a traditional glass manufacturer, it will be very successful. Sandeep Sharma, owner of Balaji Glass Works says, "Players are mainly into trading of imported glass. So, seeing the

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growing environment for solar energy here, our business sense says venturing into manufacturing of such glasses is a logical step forward for us."

PV installation in India, today, is almost based on off-grid and small capacity installations. As per industry estimates, total installed PV generation capacity is above 100 MW; and approx 97% of it is from the off-grid application. Applications of PV panels are mostly visible in the form of lighting application such as street lights, traffic signals, domestic power back-up in small cities and towns and in rural areas.

National players in the solar photovoltaic industry such as Moser Baer and Tata BP



Solar expressed their optimism over the indigenous development of such specialised glasses, but with some reservations. "Though the prices of Indian goods are expected to be lower than the imported ones, there is the critical issue of quality standards which must be strictly maintained as solar PV panels have to be made to the highest standards good enough for 25 years in the open," said, K Subramanya, CEO, TATA BP Solar.

The solar mission launched in mid-2009 plans to boost green power generation of

nearly 20 gigawatts (GW) by 2020. Out of this, in its first phase up to 2013, India plans to generate 1000 MW of power. In the first phase roll out, the focus will be on working on viable options in solar thermal and promoting off-grid systems to serve populations without access to commercial energy (basically the rural and small cities). Modest capacity addition in grid-based systems is also a priority.

According to the Ministry of Renewable Energy, renewable energy based power gen-

eration installed capacity has increased four folds since 2002, from 3% to 11% of the total renewable energy based installed capacity, which corresponds to a contribution of about 4.13% in the electricity mix.

With an estimated installation of just over 100 MW, solar PV, at present, constitutes a very small part of India's installed power generation capacity, but technology improvement complemented with domestic capacity upgradations will finally make it the major long-term source of energy.