

PV manufacturing: The rise of India

With 11 GW of solar module production capacity, investments in technology, and a focus on skills development, India is quickly emerging as the world's next solar PV manufacturing hub. And the country's "100 GW by 2022" target is encouraging local manufacturers to scale up further. RenewSys – India's first integrated manufacturer of solar PV modules, as well as key components such as encapsulants, backsheets and cells – has already made its mark throughout the world as an innovator by actively investing in European machinery for its manufacturing facilities, while remaining committed to material innovation and rigorous testing to ensure quality.

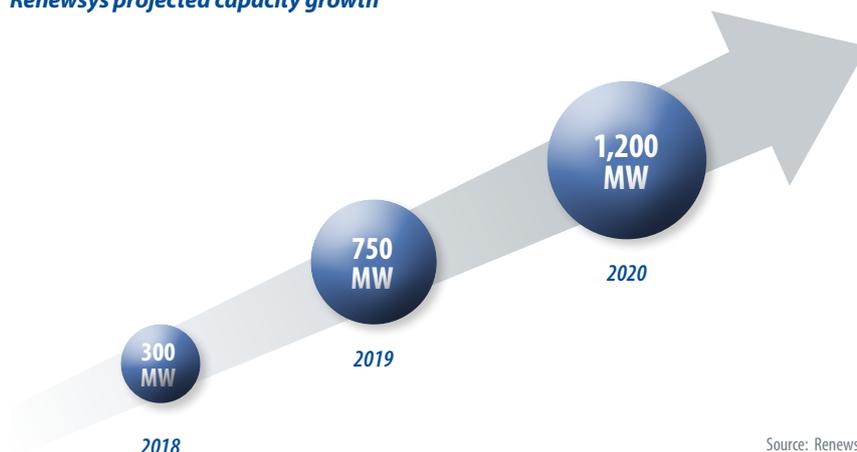
International recognition for RenewSys quality and technological innovation has come in the form of international orders to supply significant projects, including this 500 kW rooftop array in Johannesburg, South Africa.

The Energy and Resources Institute (TERI), a New Delhi-based think tank, estimates that the Indian solar sector will require 12 million tons of materials by 2030 to supply the 170 GW of solar PV capacity that's set to be installed. Given this scale, it is imperative for India to develop its own supply chain for solar, extending right across the value chain.

But Indian PV manufacturers are not only supplying their country's solar sector. Those that can meet international quality standards, develop innovative technologies, and provide first-rate service have a



Photos: RenewSys

Renewsys projected capacity growth

Source: Renewsys

very real opportunity to become key suppliers of the global solar sector.

RenewSys – India's first and only integrated manufacturer of solar PV modules and key materials – stands out as an emerging player among a select group prospering in markets at home and abroad. RenewSys has successfully scaled up in a very short time, and has developed two innovation hubs for polymer and silicon materials accredited by the National Accreditation Board for Testing and Calibration Laboratories in Bangalore, and Inertek in Hyderabad respectively – a first for an Indian company.

Ensuring quality

"India has emerged as a leading destination for solar manufacturing because of high quality and reliable PV modules and components," says Avinash Hiranandani, managing director of RenewSys India. "Indian manufacturers are now operating at larger scales, fulfilling bigger orders at economies of scale."

RenewSys – with 750 MW of module manufacturing capacity, on top of 130 MW of cells, 1.4 GW of EVA and polyolefin encapsulants, and 3 GW of back-sheets – has put systems and processes in place to prevent issues that may cause modules to underperform and fail.

In terms of modules, RenewSys has launched one of the first glass-backsheet bifacial solar modules, the "Deserv Extreme." The company also has led the market by becoming India's first manufacturer to receive a backsheet patent and deploy five- and six-busbar cell interconnection. To prevent common modes of module failure, RenewSys deploys the most advanced and consistent lamination processes. Encapsulants are manufactured in-house, using German technology, while raw materials are only sourced from top-class suppliers – incoming materials are also stringently tested. Its tabber stringer process is fail-safe, with uniform bonding at interconnecting points. Regular checks for gel content and peel strength are car-

ried out, along with electroluminescence (EL) imaging at a highly magnified resolution before and after lamination.

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RenewSys believes it stands out from the crowd due to its uncompromising approach to quality, along with its embrace of innovation, and top-quality product design and engineering.

Global presence

In 2019, RenewSys can boast of supplying projects globally, supported by an experienced team of representatives. Their modules are also covered for performance insurance from MunichRe. RenewSys has offices in India, Mauritius, Nigeria, South Africa, Singapore, the U.A.E., U.K. and China, as well as representative offices in the United States, Mexico and Brazil, on top of a growing distributor network. "Given this scenario, RenewSys has emerged as a leading player expanding steadily in the last five years to a capacity of 750 MW. This has been possible due to the preference for RenewSys modules and repeat orders that are coming in from partners and customers in India and other countries globally as well," concludes RenewSys MD Hiranandani. **PV**

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RenewSys India Managing Director Avinash Hiranandani.

