DuPont Photovoltaic Solutions bring solar power to almost 300,000 homes in rural parts of Rajasthan in India
DuPont™ Tedlar® film-based backsheets enhance durability, reliability and lifetime of solar panels

DuPont is delivering advanced materials to address the energy challenge in India. DuPont photovoltaic solutions help maximize the power output, durability and return on investment for solar energy systems.

Issue

Solar energy holds great promise to help India meet its energy challenge. One out of every four people in India does not have access to electricity.

In rural villages that are inaccessible to India’s power grid, such as in Rajasthan, villagers depend on kerosene lamps for light. In the process, they expose themselves to health and safety hazards such as toxic fumes and risks of fire.

Because India receives more than 300 days of full sun each year, solar is an ideal source of energy. If just 5 percent of the Thar desert was covered with solar panels, the energy generated would meet the country’s entire energy demand.

Challenge

The challenge was to provide an optimal solution that would efficiently harness the abundant sunlight and transform it into clean solar energy. The selection of materials with proven performance and long term durability was critical to provide a truly sustainable source of energy.

Solution

DuPont India is committed to continuous innovation, research and development to make solar energy more competitive with other sources of electricity. Consistent with that, DuPont provides a unique perspective into materials science and the capability to deliver integrated solutions. DuPont photovoltaic solutions are designed to improve the power output, reliable lifetime and return on investment for solar energy systems.

DuPont™ Solamet® metallization pastes help to increase the conversion efficiency of solar cells, significantly boosting the power output of solar panels. DuPont PV encapsulants surround and protect solar cells and panel circuitry. And DuPont™ Tedlar® polyvinyl fluoride (PVF) film-based backsheets have proven critical to protect solar panels, to ensure long term durability for their 25 year expected lifetime, even in harsh environmental conditions.

Aditya Birla Solar collaborated with DuPont India to set up a 20 MW plant near Jodhpur in Rajasthan. By specifying Tedlar® film-based backsheets from DuPont in the solar panels, the power output and lifetime of the system was optimized along with the return on investment.

Benefit

With the benefit of proven materials from DuPont, Aditya Birla Solar’s installation at Jodhpur, Rajasthan is delivering approximately 33 million kilowatt hours of clean and sustainable solar energy per year, enough to light up almost 300,000 rural households in India.