



HYBRID ENERGY SUPPLY FOR A COTTON MILL



Minimizing Fuel Costs and CO₂ emissions The SMA Fuel Save Solution

Daily power outages lasting several hours are commonplace in India's federal state Tamil Nadu. For this reason, cotton mill Alpine Knits located in Palladam, had been using diesel gensets to ensure a reliable power supply for their production site – and simply accepted the exorbitant operation expenses resulting from the fuel consumption of the gensets.

To reduce their energy bill, the cotton mill operators decided to install a PV system on the rooftop of their factory workshop – which started producing inexpensive energy in June 2013. With the SMA Fuel Save Solution, the PV system and local diesel gensets are combined to work as a PV diesel hybrid system that operates reliably even when the grid fails.

As the intelligent interface between PV system and diesel gensets, the Fuel Save Controller ensures a highly available and efficient power supply. During peak production hours, the PV system provides approximately 60 percent of the total power demand of the mill – regardless of utility grid availability – a big step towards minimizing fuel costs and CO₂ emissions.

System Size

- Genset: 1250 kVA, Genset Powerica Limited
- Installed PV power: 1 MWp
- Modules: CanadianSolar CS6P-240P

System Information

- Location: Palladam, India
- Operator: Alpine Knits
- Planning and implementation: Chemtrols Solar Pvt. Ltd., Mumbai
- Commissioning: June 2013

Annual Yields

- Solar irradiation: 1,562 kWh/kWp
- Solar yield: 1,320 MWh

PV System Technology

- Fuel Save Controller:
 - 1 x Interface Module,
 - 2 x Data Acquisition Module,
 - 1 x PV Main Controller Module
- 44 x Sunny Tripower 20000TLEE

SMA Fuel Save Solution for Photovoltaic Diesel Hybrid Systems