

Hybrid Solutions in: Pune, Rohtak & Kasna, India

3.6 MW PV Hybrid Sites Slash Operation Costs, Maintenance & Emissions

This solution shares the load between solar PV group and diesel gensets with or without presence of utility power...

Recently, DEIF's Indian subsidiary DEIF India Pvt. Ltd. has completed a 3.6 MW project for India's largest integrated solar company. The project is spread across three different client sites in Pune, Rohtak and Kasna for India's largest and Asia's third largest paint company.

Cooperating closely with the EPC, inverter supplier, vendors and the end customer, DEIF delivered and commissioned a comprehensive solution beyond customer expectations which included concept designing, engineering, approvals, manufacturing and supply, FAT, commissioning, SAT, training, and documentation.

DEIF's Automatic Sustainable Controller, ASC Plant Management, is an integrated solution for systems with utility, diesel and solar power sources.

Application challenge

The customer specified wanting to use solar power even in the absence of utility supply. Backup power was delivered by diesel gensets and the solar systems were to be designed to supply power along with the diesel gensets, sharing the load between the two groups. An inappropriate design could cause burning of excess diesel by the genset or a varying load could cause an inadvertent reverse power in the genset.

The ultimate goal of the solution was to enable the customer to share the load between solar PV group and diesel genset with or without presence of utility power with maximum solar penetration, thus resulting in maximised savings even during utility failure.

Customer Data

Having commissioned EPC projects of 175MW till date, this integrated power company stands out as India's largest. The company implements power solutions for wind, solar, hydro and geothermal energy applications.

The end customer is India's largest and Asia's third-largest manufacturer of painting solutions for interior and exterior use. The company owns 26 paint manufacturing plants around the world.



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Automatic Sustainable Controller, ASC Plant Management

Data

- ✓ 3 sites at different locations, total installed solar PV capacity 3.6 MW
- ✓ Maximum solar penetration, fast ROI
- ✓ Intuitive and user-friendly Advanced Graphical Interface system
- ✓ Display of single line diagram of the Solar PV system with status of breakers and busbar condition
- ✓ Display of real time kW reading of the Solar PV, Mains incomers
- ✓ Real time graphical view of the Active Power (kW), Reactive Power (kVAr) and Apparent Power
- ✓ Monitoring of alarms and source of alarms
- ✓ Less diesel consumption, reduced emission leading to decreased maintenance and operation cost

Product



Automatic Sustainable Controller,
ASC Plant Management

The DEIF solution – first of its kind

DEIF's ASC Plant Management, serves as an interface between solar and the diesel/gas genset controllers/Utility Power, AGC Plant Management, over the CANbus adjusting power output to meet the load requirement, thus ensuring that the solar system takes the maximum load share. The system uses DEIF's fixed power mode and mains power import/export mode features to achieve relevant operation philosophy. If the solar power output decreases due to bad sunlight, the deficit will be met by the diesel gensets through the CANbus communication between ASC Plant Management and AGC Plant Management, thus ensuring reliable supply of power to the paint plant at all times. A graphical interface solution to each of the ASC's and the AGC mains is provided by connecting them to DEIF's AGI 110.

Case Diagram

