ISO 9001-2000 Certified

CONZERV™
Smart Energy Management

Excellence in Energy Management...
CASE STUDIES

A case study of a Paint Industry

Case study of a leading paint manufacturing industry in India, having a market share of around 41%. They manufacture different types of paints like resin, distemper, enamel paints etc.

Energy Consumption Pattern:
The Major energy consumption in Paint industry is Mixing, Grinding, Tinting (Colour mixing), Thinning, Drives, Air conditioning, Office Equipments, Lighting etc.

System Configuration:
Conzerv's Energy Management System comprises of one each Smart Demand controller at the Incomer & Transformer. Power & Energy Meter (EM 3360) at the DG Panel (04 nos.) and at individual feeder (11 nos.). The DM 5240 Energy Meters are connected to the individual Load point (17 nos.) through data loggers. The software feature includes Single Line Diagram, Real Time & Historical Trends, Mimics and Report.

Benefits of Conzerv's eLAN® Energy Management System:
On Line Monitoring:

Before: Quality of power is very important parameter for paint manufacturing process, which affects its quality. All the readings are monitored manually; as the meters are located at different locations it is difficult to take the instantaneous reading around the plant. Energy consumption pattern monitored was not accurate and reliable.

After: installation of Conzerv's eLAN® Energy Management System the reading is recorded at centralized PC, which is available for analysis purpose and individual load consumption. They were able to monitor the Quality of Power, The Electricity Board voltages were monitored on real time basis and any variation from the set limits were noticed and the DG sets were switched ON thereby maintaining the quality of paint.

Benefits: By just monitoring and controlling of lighting loads during daytime they were able to save US $ 144/- month.

- Automobiles
- Beverages
- Cement
- Chemicals
- Engineering
- Fertilizers
- FMCG
- Glass
- Hotels
- Hospitals
- IT
- **Paints**
- Paper / Pulp
- Petrochemicals
- Pharmaceuticals
- Textiles
- Shoes
- Steel
- Sugar
- Wind Mills
- Shopping Malls

Conzerv Systems Pvt Ltd
(formerly Enercon Systems Pvt Ltd)

DG Monitoring:

Before: Unable to monitor the phase reversal due which the DG would trip.

After: with the help of Conzerv's eLAN® Energy Management System they were able to identify the voltage phase sequence and take corrective action before loading the DG. Hence the tripping of DG is avoided.

Benefits: Efficiency and run hrs of DG improved.

Report Generation :

Before: the data was to collected manually which was a laborious process. This lead to wrong Specific Energy Consumption (SEC) computation.

After eLAN® they are able to generate faster and accurate SEC reporting.

Health Monitoring:

Before: At the Incomer, the HT meter was showing higher reading and they were unable to identify the problem.

After: eLAN® they were able to identify the total plant consumption. It was found that when CT's at HT incomer (Electricity Board meter) was tested, there was an error of 2.5% deviation when compared to normal values. Hence the defective Electricity Board CT's were identified and replaced.

Before: starting Current in the Motor could not be monitored. Hence peak values could not be recorded.

After: eLAN® they were able to capture the Starting Current, when the motor is switched ON, using Trends. This enabled them to change from the existing star-delta to soft starter.

Pay Back

Investment in eLAN® Energy Management System	US $ 8333
Annual Saving	US $ 12,500
Payback period:	18 months