

Energy Management System(EMS)

(Based on MODBUS and LONWORKS)

Introduction

The Energy Management System (EMS) acquires data from different energy consuming equipment's in various sections of the Industries/Buildings, logs the information and generates customized reports. This information can be used for taking corrective actions leading to improvement in energy efficiency. Different field bus technologies (MODBUS, Lon Works&TCP/IP) have been adopted for energy/parameter monitoring and control in industries. Electrical, physical and control nodes have been developed & networked for providing comprehensive electrical and physical parameter measurements and control.

Features

The EMS can establish energy balance, material balance and water balance. It processes the information collected in the database to provide meaningful real-time information and reports in the form of Specific Energy Consumption (SEC) tables with on line as well as off line trend graphs.

EMS consists of Electrical Energy Node, Analog Input Node, control and display node with MODBUS/LONTALK Protocol

Maximum of 32 Nodes (Modbus)/4096 Nodes (Lon Works Technology) can be connected in the network using twisted pair wire/ power line / wireless mode of communication

Measures and displays the electrical energy consumption of each load/feeder

Measures & displays physical parameters like Temperature, Pressure, Steam Flow, % RH, Compressed air flow, Steam Consumption etc

Calculates the Specific Energy Consumption (SEC), Maximum demand and generates control signals for taking appropriate actions

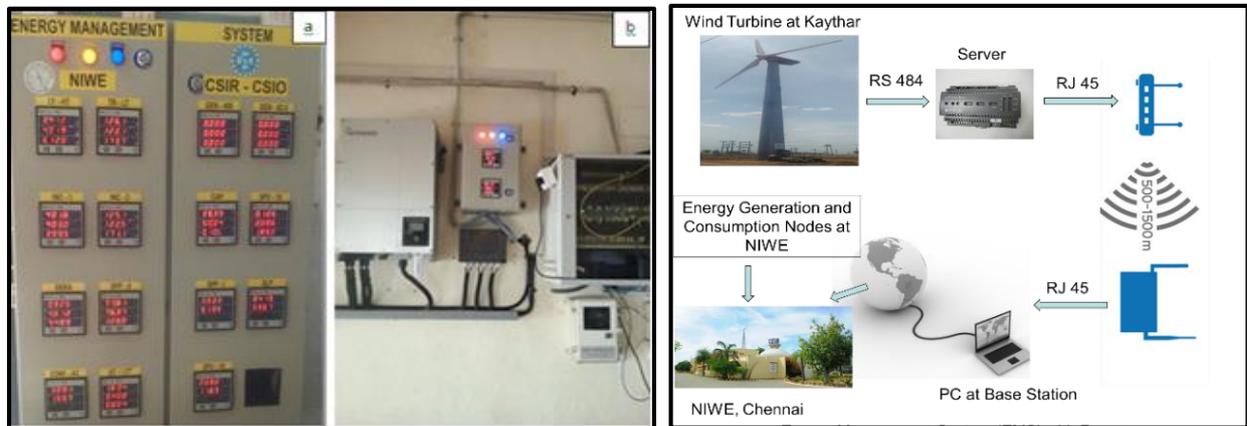


Status: TRL 8: Technology Transferred

Successfully demonstrated EMS installation at various Industrial Sectors like

- Petrochemicals
- Pulp & Paper
- Power Plants
- Engineering
- Textile
- Buildings & Commercial Complexes

Energy Management System with Remote Wind Turbine Monitoring Facility@ National Institute of Wind Energy, Chennai



Energy Management System for Electrical Distribution System

