

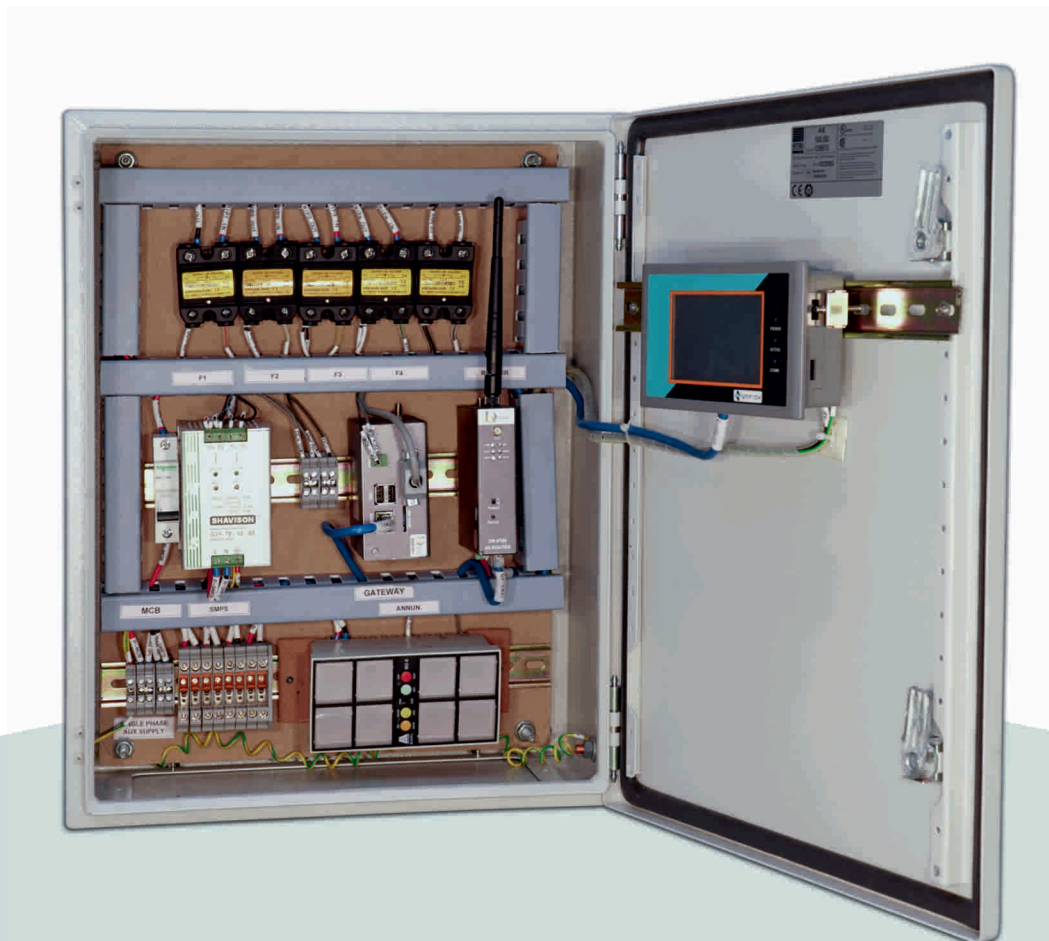
INDUSTRIAL AUTOMATION
PANEL

SUBSTATION MONITORING
PANEL

SCADA AUTOMATION PANEL

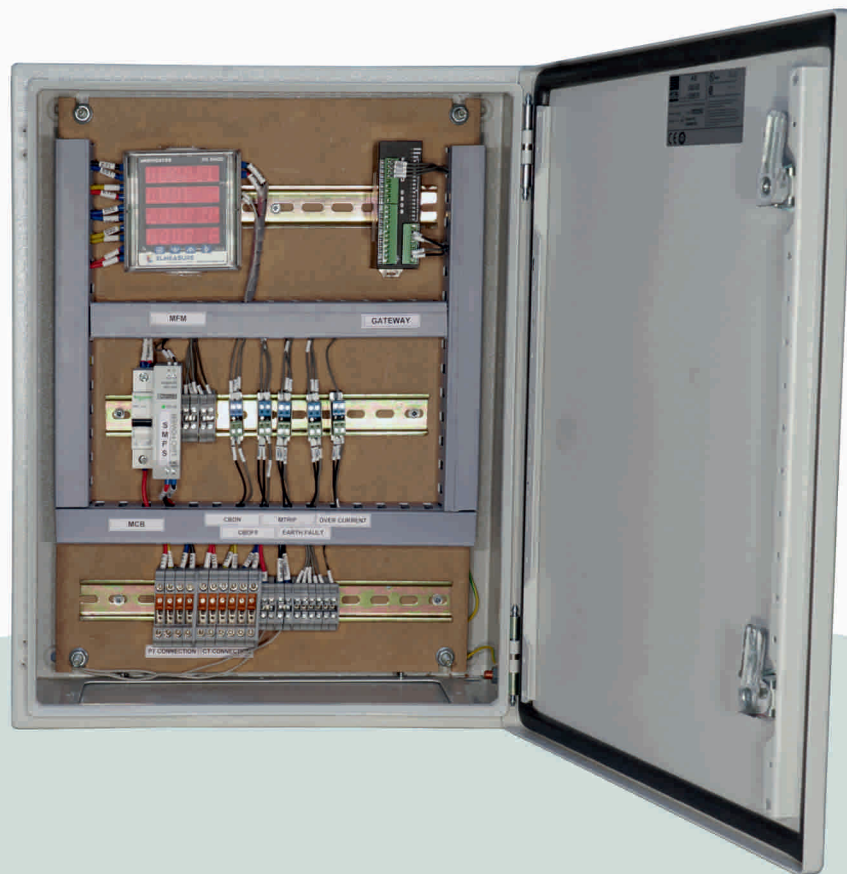
AUTOMATIC DEMAND MANAGEMENT SYSTEM

As per CERC guidelines for Deviation Settlement Mechanism, the over draw/under draw of power is to be maintained within limits of schedule whichever is lower. For that a Automatic Demand Management Scheme (ADMS) is developed for DISCOM / SLDC .



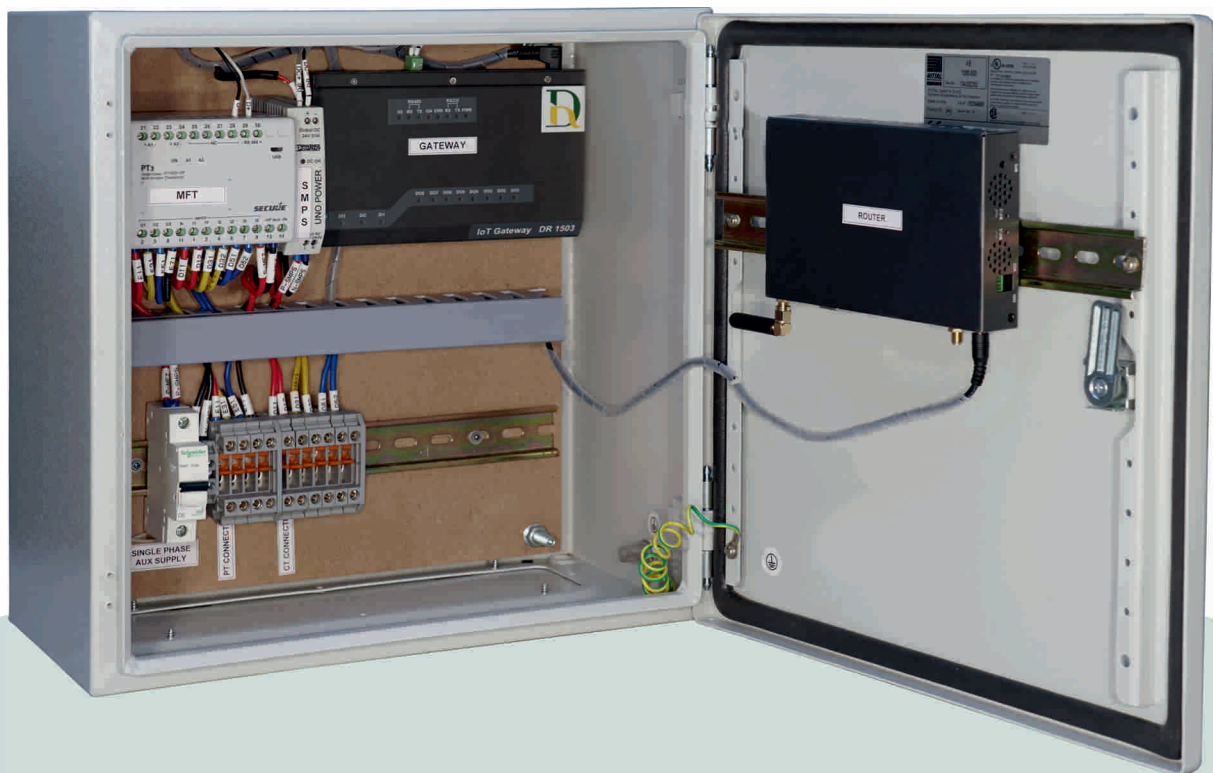
AUTOMATIC POWER FACTOR CORRECTION PANEL

To maintain the power factor in the requisite range, you have to, depending on the inductive load, connect or disconnect the power factor correction capacitors. Such systems work by continuously monitoring the power factor and making appropriate corrections to it thus maintaining the Power Factor within the required range.



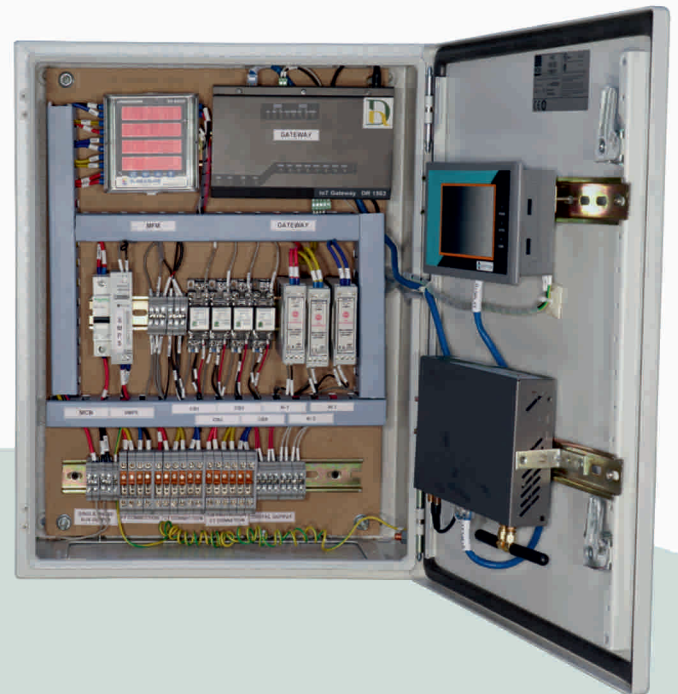
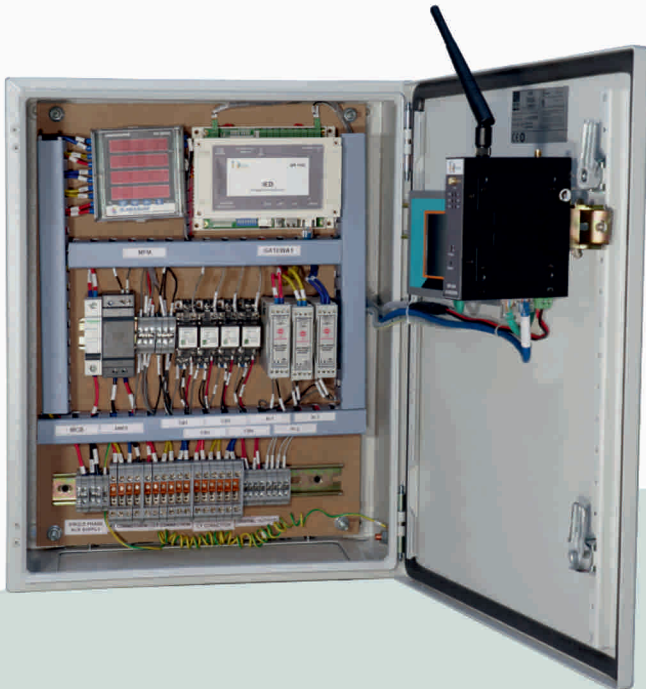
ENERGY MONITORING PANEL.

Energy Management has become one of the most critical operation for any generation / utility company. With the varied demand patterns, constraints on generation such as regulatory, pricing pressures and at times, even weather, the companies are required to highly agile and have a quick reaction mechanism.



FRTU (FEEDER REMOTE TERMINAL UNIT) PANEL

Feeder Management System (FMS) is built using the latest technology and is powered by IoT. It allows you to do Primary Distribution Planning, Operation and Optimization Studies, and Feasibility Analysis. It helps you analyse balanced or unbalanced single-phase, two-phase, and three-phase systems and provides an efficient way of operating and controlling the electrical network.



TRANSFORMER MONITORING PANEL

Distribution Transformer Monitoring which helps to measure OIT, WTI Oil level, Incomer relay position, protection relay monitoring with smart metering solution. It will increase efficiency of transformer and generated data will help to increase life of Distribution transformer.



SUBSTATION MONITORING PANEL

Reliable transmission and distribution of electricity is integral to a utility and its customers. In order to be able to provide reliable service to their customers, the companies want to be able to monitor their equipment in a substation. Such a system should be able to monitor and control the flow of electricity and quickly respond to real-time events without service interruptions.



PROTOCOL CONVERTER PANEL

This device is ideal for usage in Smart Grid, Sub-Station Metering Data Concentrator, sub-station to control centre gateway, conversion of Modbus RTU TCP, IEC 101, IEC 104, IEC 61850, OPC



4G CISCO GATEWAY PANEL

The 809 CISCO Industrial Integrated Services Router provides highly secure, reliable, and easy-to-manage 3G/4G LTE WAN cellular connectivity for remote asset monitoring. It supports Cisco IOS Software, is compact, and designed for harsh environments. Use it for distribution automation.



DC BATTERY MONITORING PANEL

The main components of the substation system are DC Battery and charger and distribution switchboard including the DC system monitoring relay. To real time monitoring DC smart meter IOT gateway require. Which send data to central scada server.



CUSTOMER BENEFITS

Key objective is to protecting the investments made in the legacy system, extend the life of existing systems and cost effective upgrade to SCADA system.

- Fully compliant to all standards
 - SCADA
 - IEC 104
 - Modbus
 - IEC 61850 (Optional)
 - IEC 101
 - OPC client
- Extended mobile and web interfaces,
- SMS and email notification
- Multiple data conversion options

SYSTEM INTEGRATION SCOPE OF WORK

- Site survey
- Layout documentation
- Project management
- Feeder IED installation
- Programming and configuration of all parameter
- Accuracy testing
- Wiring ducting
- Wi-Fi networking
- RTU installation and configuration of local SLD at substation computer.
- Alarm integration and monitoring,
- Troubleshooting and complaint management system implementation.

DESIGN CONSIDERATION

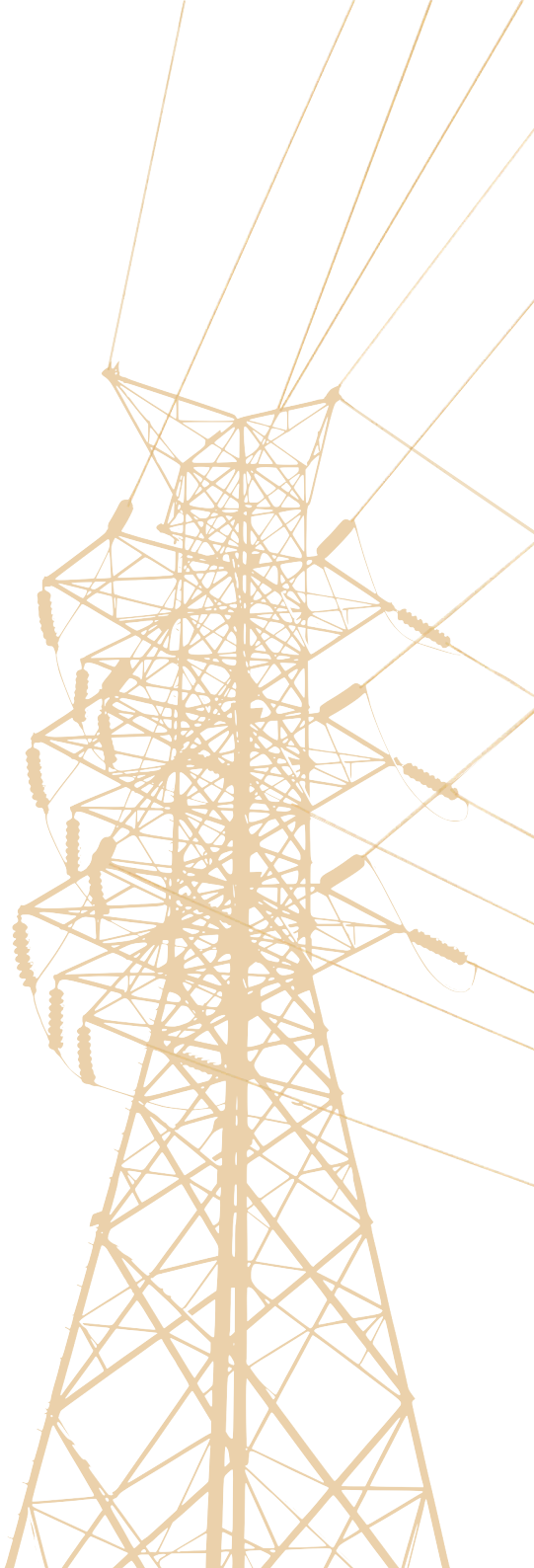
Key consideration is to achieve and measure of energy parameter with highly accuracy.

- IED (Intelligent electronic devices)
- RTU
- Smart meter Modbus RTU
- DLMS compliant
- Contact multiply relay,
- 2G/3G/4G redundant router
- Smart OTI, WTI, OLTP devices

SCADA SOFTWARE / DASH BOARD SOFTWARE

- Data Centre server software compliant with Server OS,
- Data base integration,
- Application dashboard
- Secured Backup,
- Compatible to view from range of Internet Browsers & mobile platforms [Android & IOS]
- Dashboard facility and data migration for any ERP integration
- Predictive analytics and analysis with advance analytic tools like Microsoft Power BI





Quality of services

All the required HW and SW, implementation and integration support services from a single vendor who have experience in implementing similar systems across India. Dedicated and specialized team who understand the technology and domain is of great advantage to ensure the Quality of Service and agile support requirements.



Connectivity

We use highly secure network technology, data router and firewall from 3rd party. We used SSL encryption of data VPN tunnel. We prefer to offer 3G over MPLS for more secure network or private APM from cellular company. Wi-Fi with WAP security we use for internal network can also be provided based on customer requirement.



Cyber Security

Important SCADA network and lifeline of power consumer users, we protect data from data hacking by implementing data encryption, multifunction authentication and authorization of users. Server software hosted in secure TIRE 4 class data centre. We can also work with customer to host the application in the leading cloud service providers like AWS, Microsoft Azure and Oracle Cloud Infrastructure [OCI].



Life Cycle Support

Continuous support throughout the product life cycle by constant upgrade of HW, software patches and bug fixes to ensure the smooth running of the supplied system and solution without any down time. We have a dedicated product development team who continuously learn from experience and incorporate the enhancements in our product development process.