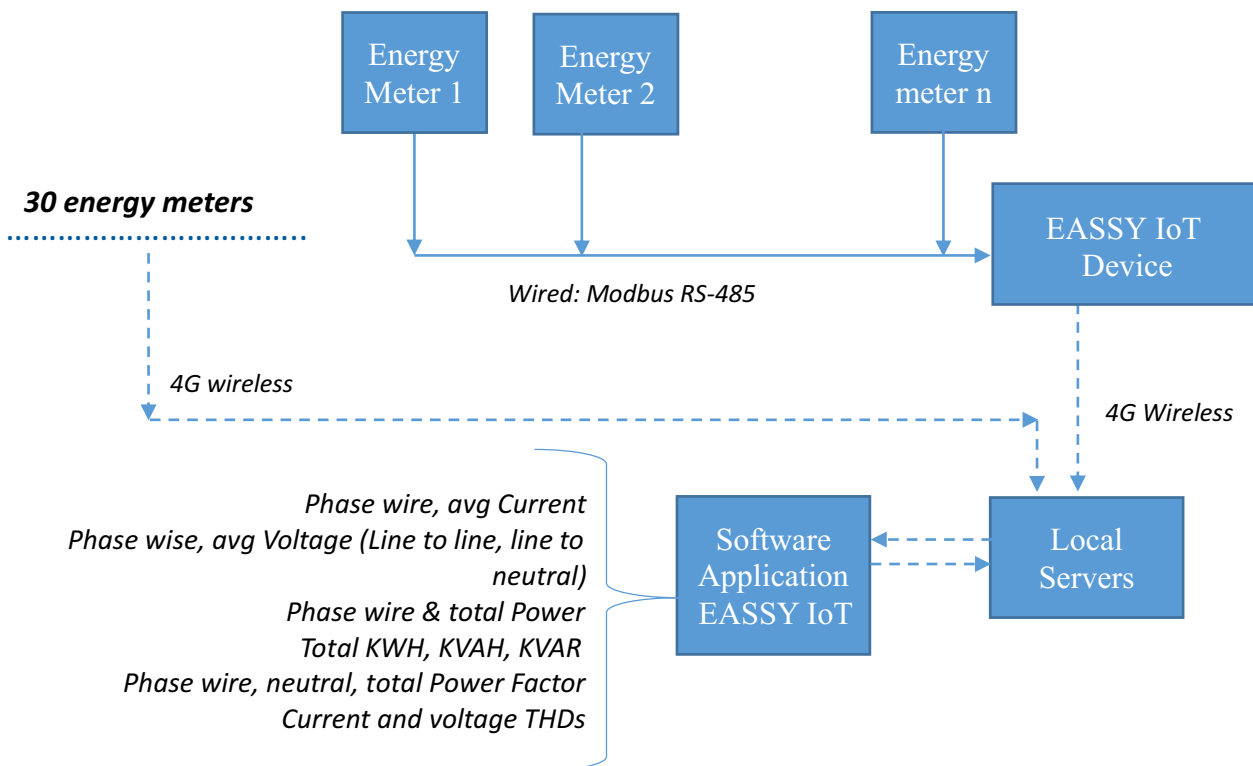## Hospital | Energy Management

Problem Statement

A Hospital is a tertiary referral government hospital for the state of West Bengal, India and is a national research institute. Established in 1707, is one of the most renowned and prestigious hospital in India. The hospital had many medical assets and machines in their different wards . The electrical team wanted to monitor the electrical & energy parameters of substations to better understand energy distribution in the hospital, energy utilization over time, diesel generator back - up time, power quality, cost & penalty implications. Apart from that, they wanted to have a on premise (local servers) deployment of the solution.
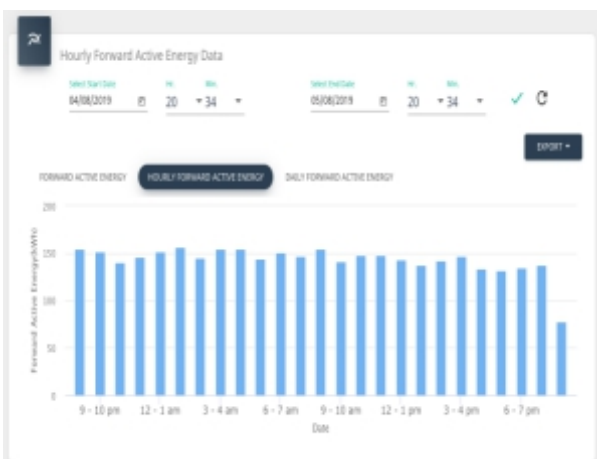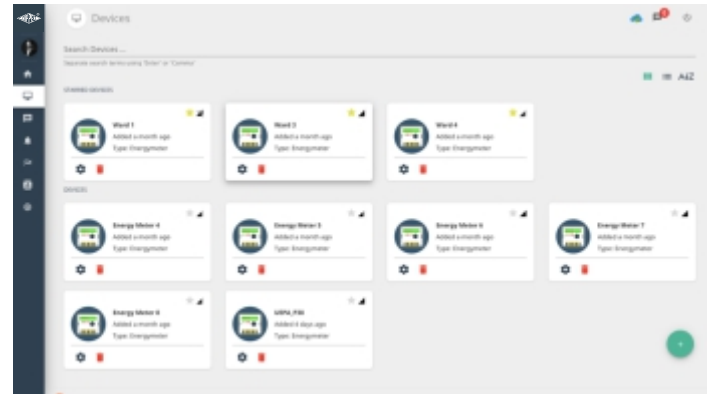
Solution Architecture

For, Hospital. The meters were installed at main incoming & outgoing feeders of the substation. The meters were wirelessly tracked by installing the EASSY IoT devices & deploying the software on local servers. In total, there are 30 such points in 1 substation. The incomer meters were either from the mains supply or the diesel generator. The distribution meters were further mapped with the respective wards & other facilities (loads).

Key Value Addition

360-Degree Visibility | Accurate & Continuous Data | No Manual Reading

Near real-time visibility of energy and electrical parameters of entire hospital. Energy meters tagged respective supply and loads (wards, common area, cafeteria, HVACs etc.)
(Pic: Live energy meters)
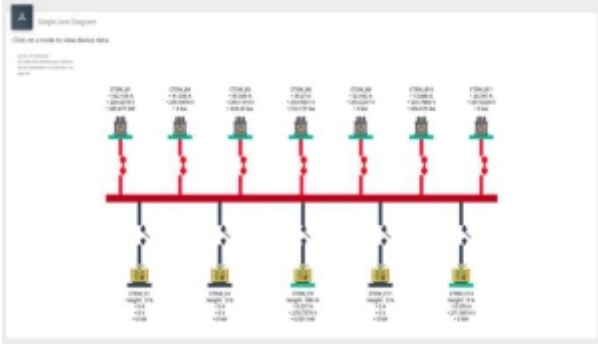

Energy Consumption Management

The electrical team is now able view the trends of Active energy, apparent energy & reactive energy(losses) of the entire hospital and individual wards to understand the energy utilization over time. This is providing vital information about the operational energy costs (Pic: Hourly KWh consumption)

Consumption Reports

Tabular daily consumptions MIS reports are generated automatically & sent via email by EASSY IoT Sense to concerned operators.
(Pic: PDF report templates: Tabular previous day consumption, Load analysis reports)
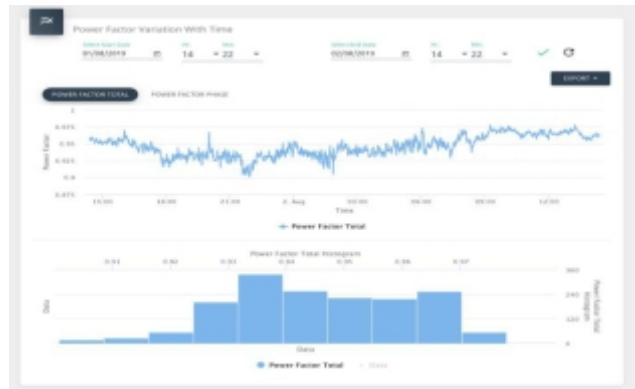
SLD Diagram

The single line diagram of the entire network to visualize the electrical network right from power main supply to respective loads of the entire factory.
(PIC: SLD diagram)

Load & Efficiency Analysis

The operator can view the trends of current, voltage, power factor & power for any selected period. This helped the operation to analyse the load performance of entire hospital and separate wards. Also, providing the key understanding about the penalties incurred due to poor power factor & reactive losses. (Pic: Power & PF Analysis)

SMS Alerts for Proactive Maintenance

Condition based SMS alerts of over current, High THD, low power factor, high Max demand etc. helped the electrical team avoid proactively system failures (Pic: High current alert, configuration)