

SEMS System

CASE STUDIES

**SMART Energy Monitoring
System at BTS Site Kasur.**



Overview

The Kasur BTS Site was selected due to High Diesel pouring. The average high diesel Pouring was 316.25 Liters per month whereas calculated pouring was to be 38 Liters per month.

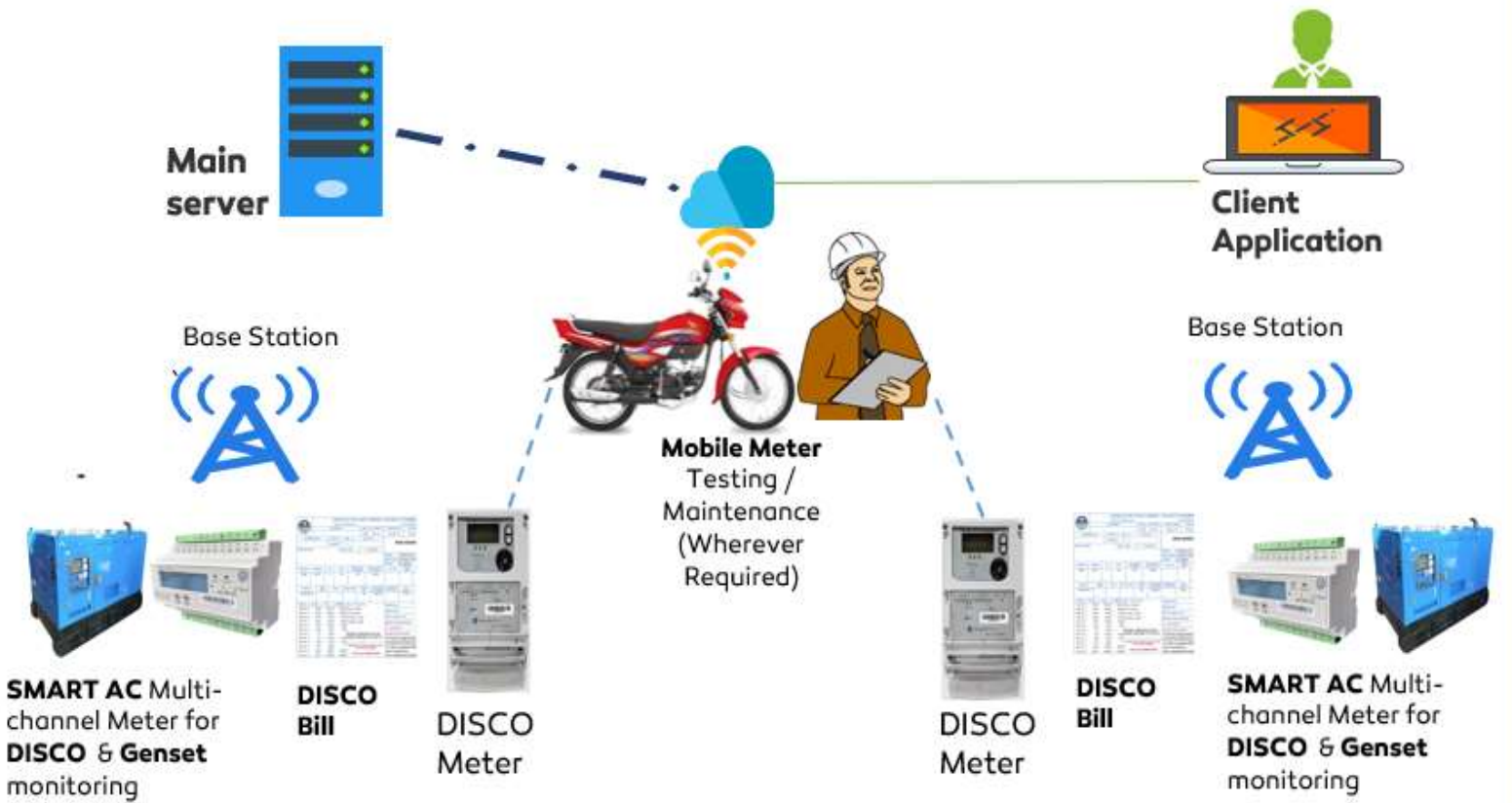
Solution

The SB SEMS solution is specially designed to provide the complete Remote Metering System for the BTS telecom sites in view to provide near real-time Interval Data of total energy Consumption and Costs of the BTS Site. For the Kasur BTS site, we installed SEMS as per the architecture to monitor the Consumption Power including the diesel genset and saved 278.25 liters per month



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Procedure

1 Smart Meter Deployment

- Supply, Installation and Commissioning of Smart Meters at BTS-sites

2 DISCO Meter Data Collection

- Disco Meter Data Collection (Pictures, Videos and Meter Reading forms) and analysis

3 DISCO Meter Testing & Replacement

- If DISCO meter is not working accurately, it is tested through our technical team. Replacement is made as per DISCOs procedure to initiate accurate billing based on new accurate DISCO meter consumption readings

4 DISCO Billing

Ensure Accurate Meter Billing and therefore Loss/Opex reduction on MoM Basis for Project Period

5 Web Portal

Web Portal and server integration for Data Monitoring, Reporting, Charting and Live data of Smart Meters Consumption

6 Support

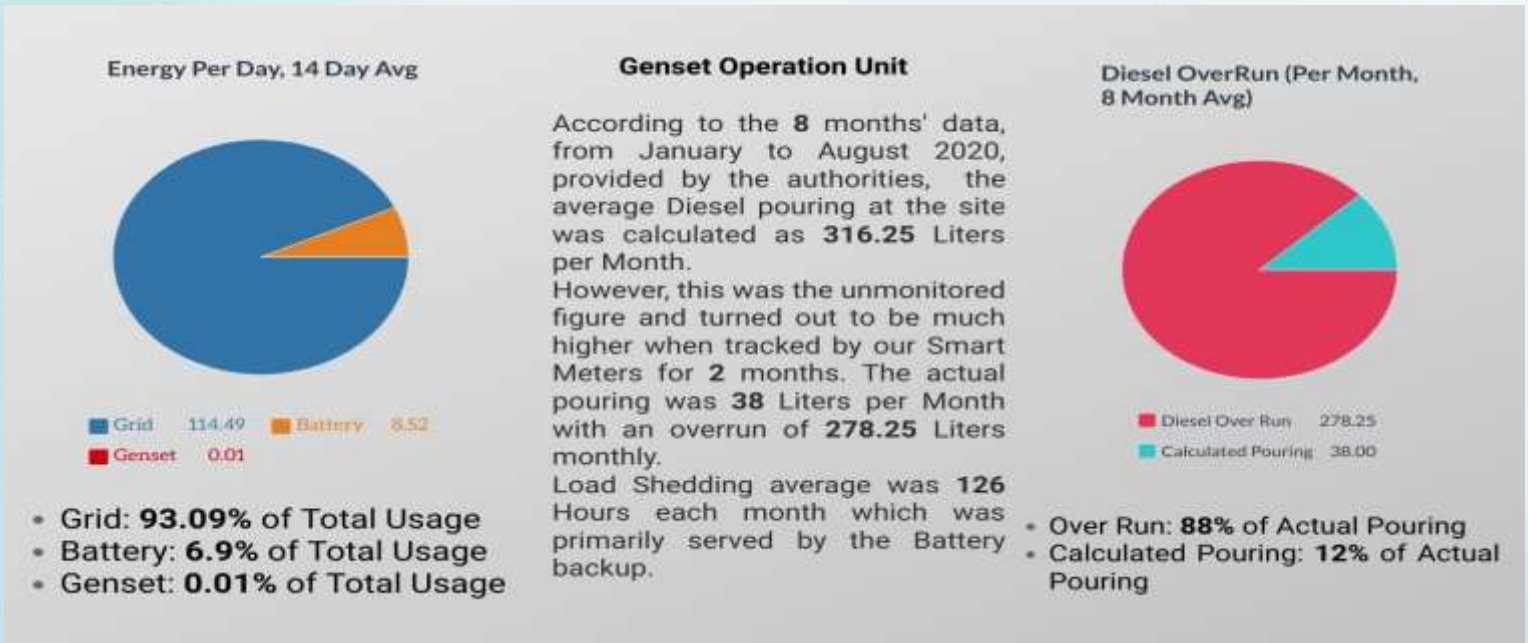
- Support and Maintenance of Smart Meters with Warranty Period and its Data

7 Actionable Reports

On demand accurate actionable reports of consumption, load shedding, Power Factor, Load etc



Case Study for Smart Energy Management Solution (BTS Site - Kasur)



This site was selected due to High Diesel pouring, the monitored points at this site were Grid, Genset & Battery.

The breakup of Energy consumption for this site was as follows;

- i. The Site full energy availability was 100%
- ii. Grid: 93.09% of Total
- iii. Genset: 0.01% of Total (also run redundantly for 2 hours)
- iv. Battery: 6.9% of Total

Genset Operation Event was recorded at this site where it was turned ON for Two hours but never used, detail is listed below;

1. On 07.10.2020 (11pm to 8 am) a Load Shedding event was recorded. 100% Energy was provided by the Battery which was 19.08 kWh Units.
2. On 11.10.2020 a Load shedding event occurred at 10:29 AM which ended at 11:21 AM (52 Mins). Energy was provided by Battery (3.55 kWh Units). BUT the Generator was also turned on and it consumed 0.12 kWh Units only in one 15 min interval. The Generator remained turned on from 11:15 to 13:15 (for 2 Hours) without being utilized.
3. The average monthly excess Diesel pouring at this Site is calculated for Jan-Aug 2020 is 278.25 Liters/month which is Rs.28,6560 per month average.

Recommendations

1. Add 5 to 9kW Solar which will result in Savings of Rs.12,000 to 20,000 per month.
2. Using our SEMS (SMART Energy Monitoring System) Solution Diesel pouring should only take place on approval from the SEMS system.
3. Predictive management of each Site according to Load shedding expectation and then combining the Diesel Pouring and SEMS monitoring will



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What Gets Measured, Gets
Managed

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