



Case Study for a Government Sector Establishment

- Chiller farm with 8 nos. of chiller & 3 pumps
- Unidentified cooling energy consumption
- Lack of engineering data to identify the individual equipment consumption pattern and maintenance issues
- Discomfort reported by occupants because of uneven cooling
- Amount of AMC paid was not justified
- No measures for energy conservation and equipment safety
- Excessive energy usage identified during initial energy audit

Situation



- To understand the cooling energy consumption
- Identify power leakages and to reduce energy consumption
- Improve maintainability
- Ensure better SLA adherence
- To detect AHU and compressor failures
- Mandate to reduce Energy Consumption
- Measure & alert users about threshold breaches in real time

Task



- Identified load imbalance. Helped to enhance better visibility
- Ensured better equipment safety by alerting on threshold breaches
- Curbed unnecessary usage and enforced overdue spare replacements
- Engaged continuously for cost cutting in AMC, Energy and Manpower
- Enhanced decision making by providing real time data and analytics
- Provided a clear road map for better cooling energy utilization and energy savings
- Helped to save energy close to 7.5% per year.

Result



- Site survey done to identify the energy guzzlers
- Installed smart energy meters and monitoring hardware and connected to SEnergy cloud.
- Provided Virtual Meters & real time visibility through SEnergy platform
- Analysed and isolated usage/consumption/wastage pattern
- Quantified duty cycles, peak and off-peak consumption
- Defined and quantified efficiency and conservation metrics
- Analysed the complete power quality with time stamps
- Analysed the extreme of power deviation for the targeted chillers
- Isolated and alerted O&M on wastage and loading pattern

Action

