



# Case Study for a University Campus

- 130 Cooling packaged units with 260 compressors spread over 13 building
- 1.5 million units electricity consumption per month
- Excessive energy usage identified during initial energy audit
- Unknown Compressor efficiency and duct sanctity
- Lack of engineering data to identify the individual equipment consumption pattern and maintenance issues
- Uneven cooling and user discomfort reported by students, visitors and staff
- Huge amount of AMC paid, but was not justified
- No measures for energy conservation and equipment safety

## Situation



## Task



- Provide better control over metrics and maintenance
- Identify Consumption and leakages
- Measure & alert users about threshold breaches in real time
- Improve maintainability
- Ensure better SLA adherence
- To detect AHU and compressor failures
- Mandate to reduce Energy Consumption

## Result



- During the fault in the critical equipment, O&M team were able to provide that electrical specification limits, as mentioned in the product specification sheet, were not exceeded using SEnergy data as audit trial
- AMC vendors escape route was blocked and OEM were made responsible for corrections
- Improved visibility and highlighted the pre-existing maintenance blind-spots through workshops and training
- 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
- Helped to save energy close to 23% per year.

## Action



- Site survey done to identify the energy guzzlers
- Installed smart energy meters and monitoring hardware and connected to SEnergy cloud.
- 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 all critical equipment
- Isolated and alerted O&M on wastage and loading pattern
- Configured alerting system to intimate the O&M team ensuring them to take action without time delay
- SEnergy Operating Centre created , configured and trained the O&M team.