

Client	CtrlS Datacenters
Project	ASHRAE Level 2 Audit
Energy Consultant	Conserve Consultants Pvt. Ltd.
Case Study	Building Management System

Project Description

The project is a leading tier iv datacenters located in Mahape, Mumbai. ASHRAE Level 2 Audit was conducted as a part of USGBC O&M V4 Existing Building Certification. The Building Management System (BMS) is in place for the building.



Findings

During the audit, it is observed that Specific Energy Consumption of the chillers is at 0.59kW/TR, which states the chillers are performing at best efficiency. Check the flow rates of pumps from the vendor and run them near to rated data. Primary pumps, & Secondary pumps efficiencies are low compared to industry standards and hence the flow of the primary pump is far lower than the rated; even though the Delta T is maintained at 7 °C the chilled water outlet temperature is at 10.5°C, 10 8 °C. This higher chiller outlet temperature is primarily due to lower flow rate of primary pumps. .

Solutions Provided

Building automation consists of a computer-based system with measurement sensors and control devices for components such as HVAC equipment and lighting. This can provide important information on the performance of building systems if they are properly calibrated and maintained. Monitoring and controlling systems within a building allow building owners to track energy use and address areas of concern, providing opportunities for improved equipment efficiency. Monitoring ventilation helps maintain healthy indoor environments. Investing in a building automation system (BAS) helps ensure that equipment is performing as intended and significant energy savings can be realized.

Results

Annual Electrical Energy Savings	: 5,34,000 kWh/year
Annual Cost Savings	: 42.12 Lakh/year
CO ₂ Emission Reduction	: 464.6 Tons/year
Estimated Investments	: 40 Lakhs
Simple Payback	: 11 Months