

A BUSINESS CASE STUDY



FOR DATA CENTRES

A flagship Data Centre in London reports an annual £94,000 saving on its energy usage by utilising Trend BEMS to optimise its chiller plant.



THE CHALLENGE

At a flagship Data Centre in London, eight roof-mounted chillers are used to maintain a uniform internal climate. They are controlled by a Trend Building Energy Management System (BEMS), a network of sensors and software that continually monitors temperature and humidity and automatically adjusts chiller operation. The efficiency of those chillers can have a big impact on the operating costs and carbon footprint of the Data Centre, and this client's on-site Facilities Manager strongly suspected that the system was not performing as well as designed. "I was convinced that our chillers were not as effective as they could be," he says. "To investigate further, they called in Chartwell Controls, a Trend Partner specialising in Data Centre solutions."



THE SOLUTION

Chartwell Controls utilised TREND's BEMS Supervisor platform to gather real time data on each chiller, allowing them to quickly identify issues with the operation. "When we analysed what was happening, we realised that the cooling requirements could be met with just three chillers running at full load – even at peak demand," Alan King from Chartwells says. "That is much more efficient than running several chillers at part load. We divided the eight chillers into two banks of four, linked all of them back into the BEMS and reprogrammed the control panels to support this revised configuration."



THE OUTCOME

"The review established that the chillers use around 7,577,000kWh per year," says Alan. "Our solution was shown to have the potential to reduce this by 857,000kWh – approximately 11%. That's a £94,000 saving annually based on a typical energy tariff of £0.11/kWh."

"I'm thoroughly impressed by what Chartwell Controls has been able to achieve with our Trend BEMS – the results are far beyond my original expectations," the client concludes. "The BEMS helps with our ISO 50001 compliance, makes our operational infrastructure more resilient and enables us to run a more sustainable facility. It's a fantastic result."

Benefits

- Energy cost savings
- Operational efficiency and resilience
- ISO 50001 compliance

CHARTWELL

TREND