

Chiller control improvements save £13,000 in six months at Vantage West

AEC reviewed the chiller control strategy at Vantage West, an eleven-story glass clad office tower in Isleworth West London. We immediately identified a number of issues that once resolved would lead to a marked improvement in energy efficiency and reduction in electrical consumption as well as CO2 emissions at the site.

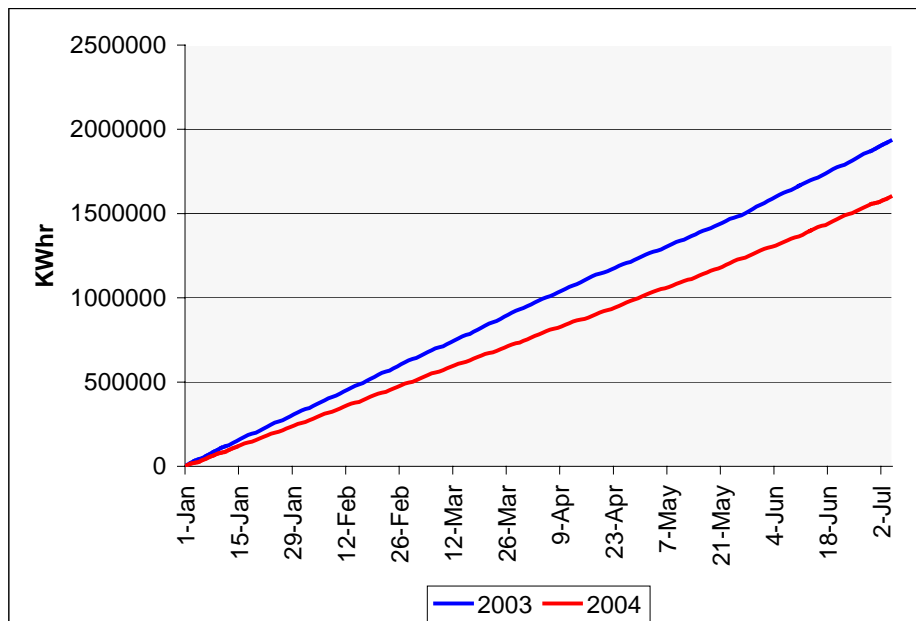
Chiller run times; the chillers were running for very long hours regardless of any requirement for chilling, even a simple time clock control may have helped here.

Compensation; there was no correlation between outside air temperature (demand) and the amount the chillers were producing (supply). It is a fact often largely ignored that the relationship between outside air temperature and demand for cooling (or heating) is a linear one and it should be able to plot this on a simple XY graph.

Use of free chilling; when the outside air temperature is cooler than the internal target temperature of a building it makes sense to take advantage of the free cooling that is available rather than run expensive compressors to create artificial chilling. Use of free chilling when available will also improve the quality of building services for the occupants.

The solution therefore to the issues we identified were self evident and we were able to compensate the chillers ensuring that they were only providing as much chilling as there was demand and where possible we helped reduce the chiller load by introducing cool ambient air.

The results



As can be seen in the graph above cumulative savings by month for the first six months of 2004 versus the first six months of 2003 have amounted to £13,000 and are well on course to achieve an annual saving of £26,000.

In terms of CO2 we estimate to save 300 tonnes per annum.

In addition to the chillers running more efficiently there should be an added benefit to the maintenance regime at Vantage West, with the chillers running less hours maintenance requirements will be reduced and long term reliability will be enhanced.

Call AEC on 08453 30 60 30 or email info@efficientcontrol.com
for a review of your energy saving opportunities