We are consultants who deliver real energy use reductions, to save businesses money and reduce their carbon footprint.

## NSW Hospital - 34% Energy Cost Saving

## Level 2 Energy Audit Implementation Support

This hospital was a new construction, less than two years old. The audit was requested when the energy bills were consistently higher than for the old building, despite the new building containing modern equipment and a Building Management System (BMS).

JCM commenced an audit with thorough analysis of billing data and development of an energy use model:

Climate control (HVAC) at the

site was the largest energy

user, with 74% of the total energy usage. The priority was to find savings in this area as it would yield the highest returns

to the client.



JCM logged the activity of the HVAC system using specialist instruments and the existing BMS and analysed the trends. We discovered that the BMS had not been rigorously commissioned and that there were inconsistencies in the setpoints, operating hours and gaps in the control logic for the chillers and boilers.

JCM identified many energy savings that could be realised almost immediately with no capital outlay. These included:

- Optimising the schedules in the BMS so air conditioning reflected occupancy
- Adjusting the control logic of the boilers to reduce energy consumption
- Adjusting the control logic of the chillers and improve integration with the boilers
- Fine tuning the settings of the air handling units

Following the implementation of the some of the identified opportunities, the site realised significant and immediate savings in both their electricity and gas bills. The electricity bills have decreased by an average 17% and the gas bills by an average of 30%.



Client Feedback

"The staff at JCM were very professional, easy to communicate with and very knowledgeable in all aspects of building operations, plant and equipment. I would have no hesitation in engaging their services again or highly recommending them to achieve worthwhile energy cost savings"



In Brief This hospital was a new building with modern control systems

Energy bills were consistently higher than old hospital

JCM identified BMS was not properly commissioned and boiler and chiller logic was sub-optimal

JCM carried out adjustments to BMS schedules, set points and other equipment parameters as part of postaudit implementation support

This led to immediate and significant savings

**Annual Savings:** 

- 34% cost
- 1000 MWh electricity
- 4500 GJ gas
- 51% energy use
- 1374 t CO<sub>2</sub>e

