CASE STUDY:

University of Technology Sydney, Sydney Australia

Total Renewable and Energy Efficiency Solutions

PROJECT SUMMARY

Project Type – Energy Efficiency Upgrade

Educational Facility – Two main campuses (consisting of numerous buildings and existing various technologies) of University of Technology Sydney (UTS), the Ultimo high rise tower building in the CBD, and the metropolitan Kuring-gai campus.

Project Cost – AUD5.6 Miliion

TECHNICAL SUMMARY

Campus wide energy efficiency upgrade and an integrated building re-turning process of major mechanical plant

A holistic engineering approach was developed to address multiple building services technologies of Lighting, Heating Ventilation & Air Conditioning (HVAC) and Building Management System (BMS).

The upgrade of the facilities was designed and implemented with the latest technologies, including the implementation of over 12,000 energy efficiency lighting fixtures, and upgrading the HVAC system. This included the installation of two new, high efficiency chillers into the space constrained plantroom locations, as well as 20 high efficiency pumps and 30 Variable Speed Drives (VSD).

Solar Window Tinting was also installed to reduce heat transfer into lectures theaters, tutorials spaces and offices.

Due to the age of the facility, a significant amount of detail regarding electricity consumption and equipment details was not readily available. To address this an asset management records of UTS equipment was built so we could develop an accurate Energy Efficiency solution. As a result we created an accurate asset register for UTS of over 2,400 items of equipment.

In addition, as part of the campus wide re-turning of the HVAC system, the BMS was upgraded at both the “front” end with new digital visual representations of how the system is performing, and at the “back” end, where over 1,000 set points were physically checked, replaced and re-calibrated.

This total system re-turning process has ensured that the upgrade HVAC Systems are now optimized to achieve both significant energy savings as well as providing the required comfort levels for the staff and students of the university.

The project has now been full commissioned, and forecasted energy savings are being achieved

CONTACT US

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