

Session 2

HIDDEN ENERGY SAVING OPPORTUNITIES IN TERTIARY EDUCATION BUILDINGS

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The challenge and importance of reducing greenhouse gas emissions is widely accepted in the battle against climate change. Improving the energy efficiency of existing building stock has been well documented as one of the most cost effective methods to achieve significant reductions. The tertiary education sector is positioned at the forefront in terms of research and development as well as creating exemplar projects to showcase the potential for energy efficient buildings.

This presentation reports the findings of an energy improvement opportunities review of an eleven storey education building belonging to a major tertiary education provider in Victoria, Australia. A number of energy improvement projects had already taken place following a major energy audit in 2006. These projects focussed on efficiency of mechanical and electrical equipment and achieved an actual reduction of approximately 25% in building greenhouse gas emissions. The outcome is impressive; however energy saving opportunities that could potentially achieve an additional 50% saving in building greenhouse gas emissions have been identified in the current study through a variety of projects ranging from façade improvement to updating the cleaner's operation protocol.

These results highlight the need to review the broader issues outside of the efficiency of the mechanical and electrical equipment. Understanding the operational characteristics of the spaces can assist in identifying abnormalities in energy consumption patterns which in turn can often lead to low cost opportunities for greenhouse gas emission reduction. These opportunities can often be hidden from the building operators due to the lack of information available. Improvements in energy sub-metering and building control system data logging are essential in order to realise these potential savings.

Presenters Biography

James Wewer is Sustainability Manager at Slattery Australia where his role includes providing Clients with sustainability advice in order to reduce the environmental impact of their property and developments throughout all project stages as well as implementing Slattery Australia's own Environmental Management System (EMS).

James is a Chartered Mechanical Engineer and Sustainability Consultant with twelve year's experience working for leading engineering consultants within the UK, France, Singapore and Australia. He is also a LEED and Greenstar Accredited Professional and a NABERS Accredited Assessor. James has significant experience in optimising the efficiency of building services systems, sustainability consultancy, energy and water auditing and the implementation of energy efficient measures in existing buildings.