

# New school of thought

One year after undergoing a lighting refit, Victoria University is reporting impressive results in cost savings and reduced emissions. Paul Skelton reports.

Victoria University (VU), which was founded in 1916 as Footscray Technical School, has undergone a green lighting renovation at six campuses following an energy audit in the second half of 2006.

One year after refitting facilities at Footscray, Werribee, Melton, St Albans, Sunshine and Sunbury, VU reports a saving of more than \$73,000 on its energy bill and a reduction in greenhouse gas emissions of 470t.

“VU has been working to reduce our impact on the environment over the past four years,” says environment project officer Rachael Keefe. “The university’s environment management plan has the objective of continually reducing the consumption of electricity and gas.”

In particular, VU is seeking a 15% reduction between 2008 and 2011.

To help achieve this, VU installed about 10,000 Save It Easy adapter systems manufactured by lighting manufacturer Ilum-a-Lite.

Save It Easy is an electronic ballast for retrofitting existing FTL fixtures that have conventional electromagnetic ballasts. It also enhances FTL system efficacy through its electronic high-frequency operation, consumes less power, and operates at a near-optimal power range.

The system can achieve savings in energy costs of up to 45% compared with electromagnetic ballasts.

“A lighting upgrade was one of the easiest solutions available to us,” Rachael says.

“Significant savings were able to be achieved quickly because lighting typically accounts for about 25% of total electricity consumption in a commercial environment.

“When an option to retrofit existing T8

36W lighting with T5 28W lights became available, without replacing the whole fitting, we saw this as a good opportunity to save energy.

“The Ilum-a-Lite product was brought to our attention by our energy auditor, who had trialled the product at a number of other locations and was happy with the technical performance.”

VU invested \$250,000 in the refit, with an estimated payback time of 41 months.

Rachael says the installation of about 1,900 fittings, mainly in classrooms and corridors, took close to two weeks. Working around scheduled class times meant there were no operational issues during the installation period.

VU has vigilantly adopted other methods of reducing its carbon footprint, such as installing voltage-reduction units, 365-day time switches for the HVAC system, replacing the cooling tower fan motor’s direct online starter with a variable-speed drive, and installing a Maxim series digital controller on hot water units at the St Albans campus.

Mark Rutherford is chief executive of Ilum-a-Lite, an accredited participant in the NSW Greenhouse Gas Abatement Scheme.

“Most strip fluorescent lighting in Australia uses 1200mm T8 tubes with electromagnetic ballasts,” he says.

“These consume up to 45W for each tube and ballast combination. The problem is that T5 tubes don’t fit in T8 lamp holders and can’t be used on electromagnetic ballasts, so there haven’t been any opportunities to convert inefficient T8 light fittings to T5 fluorescent fittings.

“Further, a T5 upgrade was considered too expensive in this case until Ilum-a-Lite called on the university to introduce Save It

Easy. The rest is history.”

T5 tubes are about 50mm shorter than T8 tubes, and are purportedly 30% more energy efficient.

“Save It Easy fixes all of these problems. The main adapter converts the fitting to an electronic high-frequency ballast and occupies the 50mm gap. With a pin adapter for the other end of the T5 tube, and a fused link starter to replace the pulse starter, Save It Easy allows for a simple retrofit from T8 to T5.”

Mark says the retrofit maintains the energy efficient advantages, double lamp life, one-third mercury and improved operation of a standard installation.

Other benefits of the Save It Easy adapters are a 30% energy saving on most fittings, or up to 40% if converting a 58W 5' fluorescent, greater maintained lumen output, lower mercury content and easy installation.

“Anyone who can change a fluorescent tube can install Save It Easy. Further, we have seen payback from 17 months to four years depending on operating hours and cost of electricity. Rapidly increasing energy tariffs means these payback timeframes are reducing quite quickly.”

Since the VU installation, Ilum-a-Lite has had to protect its patented products against cheap copies from China.

Mark says the Save It Easy product, which was developed in Germany then patented in 50 countries worldwide, faces stiff competition in the energy-efficient lighting market due to increased emphasis on environmental protection.

“The environment is hot and business is good as we struggle to keep up with demand. Unfortunately with increased demand comes increased competition, as companies large and small chase market share.

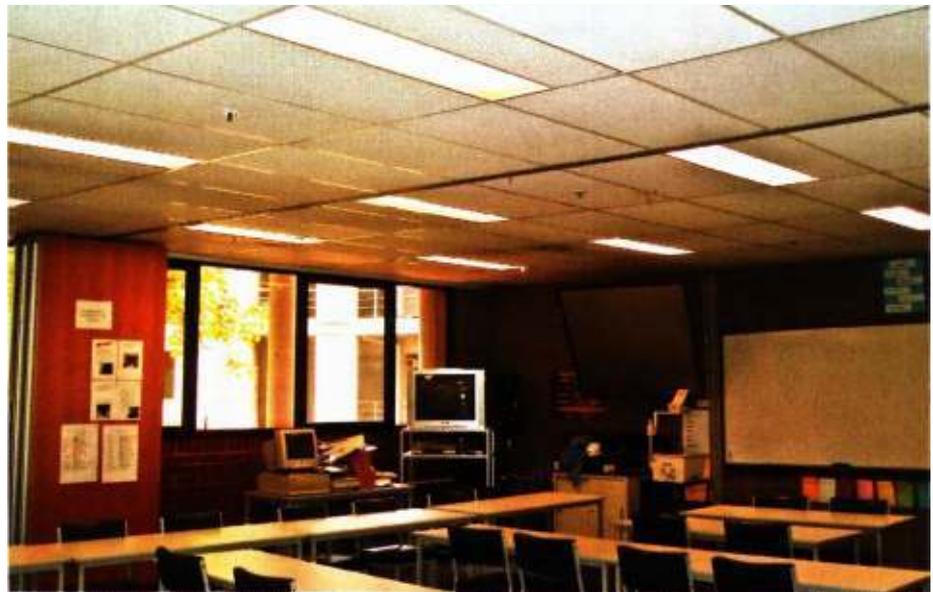
“For us, this means having to devote more time and money to defend our products from unfair, unscrupulous and illegal tactics.”

Ilum-a-Lite has taken legal action for patent infringements against a Hong Kong company operating in Sydney – a company that had been prosecuted in Hong Kong.

Earlier this year Ilum-a-Lite filed a



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complaint with the Australian Competition and Consumer Commission against the German lighting manufacturer Osram, which allegedly distributed a document containing false and damaging claims about Ilum-a-Lite products in the Australian market. ■

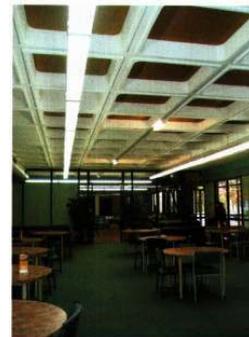
**CONTACT**

Ilum-a-Lite



1800 133 666

[www.ilumalite.com](http://www.ilumalite.com)



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