

Hi James,

Lighting upgrades can deliver significant energy savings for almost any organisation, with lighting accounting for an average of 15 to 25 per cent of electricity use for NSW businesses. The good news is that installing commercially proven energy efficient lighting can reduce energy consumption by up to 82 per cent.

The Office of Environment and Heritage recently released the [Energy Efficient Lighting Technology Report](#). This free resource will help you build your business case for energy efficient lighting

## What to consider when installing LED lights

Light emitting diodes (LEDs) can be a very efficient lighting source. For example replacing a downlight, magnetic transformer and 50 W halogen lamp with a 16 W complete LED luminaire will reduce energy consumption by around 75 per cent.

Many LED lights are dimmable and produce only a small amount of heat, which can reduce the air-conditioning load in summer.



Quality LED lights should have:

- good heat sinks – these will take the form of heavy metal fins behind the LED
- smart optics, such as lenses that will deliver light where it is needed
- a separate power supply properly matched to the LED.

Remember that LED lights may not always be the best solution. LEDs are designed to deliver light to a relatively small area. Where light is required over a large surface area (e.g. a series of workstations), another solution, such as a modern fluorescent tube, can deliver superior performance and energy savings.

Before finalising your implementation strategy, you should consider the following LED risk management list:

- all components are of the highest quality and sourced from reputable suppliers
- a test area has been evaluated and the technology is suitable for widespread installation
- luminaires have an adequate method of dissipating heat
- the supplier has provided evidence of lamp life testing

- the supplier has provided evidence that the luminaire is compliant with all applicable standards
- the supplier has provided evidence that the completed installation delivers appropriate lighting to meet AS1680 requirements.

## Energy efficiency events and training

For more information and registration details, select the event you would like to attend.

Energy Saver and OEH events	Conferences and seminars
<b>Measure to manage your resources masterclass</b> 29 November 2012, 9.00 am – 11.00 am Sydney Olympic Park	<b>Energy efficiency enhancement through retrofitting of commercial buildings</b> 6–7 December University of Wollongong

## Selecting lighting sensors and timers

Saving energy with lighting is not solely about installing the most efficient lights. It is also important to ensure lights are switched off when not required. There are a number of automated systems that can help with this.

- Manual time delay switches – which switch off lights in an area after a designated time.
- Automatic time switching – which programs lights to go on and off at pre-determined times.
- Occupancy sensors – which switch on lights when an area is in use.
- Daylight sensors – which alter light levels based on current daylight levels.

Installing high efficiency lights which are also automatically controlled to minimise use when not required can be a very effective tool in building your organisations' energy efficiency strategy.

## Learning energy saving lessons at TAFE

### EXPERT TIP

After you have reduced your consumption, claimed your Energy Savings Certificates and improved your lighting, what more can you do? Recycle!

Most discharge lamps (fluorescent, metal halide, mercury vapour and sodium vapour) contain materials that do not belong in landfill. Contact [FluroCycle](#) and they will direct you to the best recycling solution for your needs.

For around \$1.15 per lamp you can ensure that the harmful components of these types of light sources are properly managed.

TAFE NSW – New England Institute provides vocational education and training to 21,000 students in the northern inland region of NSW. The Institute has saved an estimated \$29,000 in energy costs at its Moree and Inverell campuses, reducing energy use by 25 per cent following the completion of their Energy Saver audit.

Julien Freed, Managing Director,  
Julien Freed Consulting

Since 2007, the Institute has been very proactive in reducing its power use across all campuses and received a prestigious 2011 Green Gown Award for Sustainability in Tertiary Education. So when Director of Educational Operations Bernie Ingle heard about the Office of Environment and Heritage's Energy Saver program, he was immediately interested.

'We selected the Moree and Inverell campuses for the audit because they are typical of our catchment area and covered most building types and ages,' says Ingle. 'Our objective was to extrapolate the audit's findings for our campuses in Narrabri, Coonabarabran, Gunnedah, Glen Innes, Quirindi, Tamworth, Boggabilla, Armidale and Tenterfield.

'For example, the audit recommended we replace T8 fluoro lights with T5s, which we implemented at numerous campuses – not just Moree and Inverell.

'Our challenge in managing these educational facilities is to minimise our energy expenditure and impact on the environment while providing top-rate practical instruction for students.

The Institute's audit recommendations included the following initiatives:

- significant lighting upgrades (e.g. replacing high-bay lights and halogens with compact fluorescent lights)
- removing several small hot water systems, putting timers on instant hot water dispensers or using kettles in their place
- replacing an old evaporative air conditioning system and gas heating system with a heat pump
- removing duplicate heating systems
- installing timers on teleconference equipment
- enclosing sub-floors on buildings.

---

## Contact Energy Saver

To find out how your organisation can save energy, visit the [Energy Saver website](#), email the [Energy Saver team](#) at [energysaver@environment.nsw.gov.au](mailto:energysaver@environment.nsw.gov.au) or phone 02 8837 6000.

With electricity prices increasing, more and more businesses are realising the benefits of energy efficiency.

[Energy Saver](#) offers subsidised energy audits and implementation support. Energy Saver audits investigate specific opportunities for your business to save energy, money and carbon pollution.



---

We welcome your feedback and suggestions for future editions. Please [email the editor](#) at [energysaver@environment.nsw.gov.au](mailto:energysaver@environment.nsw.gov.au)

[savepower.nsw.gov.au/energysaver](http://savepower.nsw.gov.au/energysaver)

[Privacy policy](#)

[Contact us](#)

[Unsubscribe](#)

ISSN 2201-1277 OEH2012/0938