

# Case Study PricewaterhouseCoopers - Smart lighting slashes energy demand by 29%



## Goals

- Significant reduction in energy usage
- Long term goal of a 4 star National Australian Built Environment Rating System (NABERS) Energy tenancy rating

PricewaterhouseCoopers (PwC) joined CitySwitch Green Office in February 2008. Corporate Responsibility is an important strategic focus for PwC as a firm and to the 6,000 people within the company. As part of this strategy they are committed to environmental responsibility and became carbon neutral on 1 July 2008.

Mark Johnson, CEO, PwC Australia said on joining, "CitySwitch Green Office is therefore a natural extension of our wider environmental responsibility program and recognises the need for the community generally to acknowledge and address the long-term impacts of climate change."

## Energy use review

PwC's Sydney offices are located in the Darling Park development on the western edge of the CBD. The big accounting firm commenced its upgrade by commissioning a review of its energy use. The review recommended a number of lighting control, light fitting and supplementary air conditioning projects and identified an advanced automatic lighting control system as an optimal system for the site.

The firm had tried several other ways to manage their lighting out of hours including using security staff and the tower's building management system. The methods were unsuccessful in such a large facility particularly with project work on tight deadlines, and staff often working extended hours. The firm recognised it needed a highly flexible, tightly zoned lighting control system.

## Lighting specifics

The automatic lighting system has no manual switching; instead, lights are activated only when staff are present in each zone. A network of interconnected sensors on each floor ensures that lights are only on in the sections of the floor where staff are working. The system is versatile enough to cater for any special tenant needs such as maintaining corridor and exit lighting.

There are 1,600 sensors throughout the tenancy and the job required 8,000 ceiling tiles to be removed and reinstalled. A total of 40km of cable was dragged through the ceiling spaces and electricians plugged in 4,800 electrical connections.

At any time in the typical office areas, lights will automatically switch off 20 minutes after the last staff movement is detected in that lighting zone.

## Project Partners



<b>Signatory status</b>	
Date joined CitySwitch	February 2008
Tenancy size	31,800 sqm
NABERS Commitment rating	★★★★
Website	www.pwc.com/au
<b>Key outcomes</b>	
Annual saving	29% reduction across the firm's lighting energy demand
Cost of investment	\$800,000
Technology	Automatic lighting control system

# Australia's largest energy efficiency upgrade to an operating office

Due to the fact that PwC staff are frequently out visiting clients, at meetings or in training, this means that whole zones will quite often have their lights off during the day.

No energy is wasted on unnecessary lighting. The system has the capability to detect ambient light levels, and adjust the lights down or switch them off completely when sufficient natural light is available. Even the lights in the lift foyers are controlled. At night time, they're cut back by 50%.



In addition to the installation of the lighting control system, 1,200 low-voltage downlights were upgraded with the installation of energy-saving electronic transformers, and each lamp replaced with a new high-efficiency one. Total energy consumption per fitting was cut from 70 watts to around 40 watts. Per fitting that's only a 30 watt saving – but multiply that by 1,200 fittings and the savings are significant.

## The results

Australia's largest energy efficiency upgrade to an operating office has led to PwC cutting its electricity use for lighting at its Sydney office by 29%.

The automatic lighting control system proved a viable investment for the firm. It significantly reduced the greenhouse impact and was appealing to staff.

PwC has further demonstrated its environmental leadership by operating on a carbon neutral basis since 1 July 2008.

## Your business can get involved

Join CitySwitch and discover how small changes can make a big difference to Australia's future environmental health – and that of the planet. Visit [www.cityswitch.net.au](http://www.cityswitch.net.au) for more information or call the CitySwitch Program Manager in your state. Contact details are listed on the website.

## Useful links

[www.pwc.com/au](http://www.pwc.com/au)  
[www.cityswitch.net.au](http://www.cityswitch.net.au)

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**Mark Johnson,**  
CEO, PwC Australia

CitySwitch Green Office is a national tenant energy management program. Previously known as the 3CBDs Greenhouse Initiative, the program works with tenants to improve office energy efficiency, reducing the CO<sub>2</sub> emissions attributed to climate change.

## CitySwitch Partners



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