

# 235 Stanley Place Townsville



## How an aging office tower achieved a 5 star energy efficiency rating

The owners of this thirteen-story building needed to upgrade their energy efficiency rating to retain federal government tenants. They developed and adopted an Energy Management Plan that resulted

in the building being graded Class A office accommodation. Their story proves it's never too late—it's now believed to be the oldest building in Australia to achieve a near 5-star energy efficiency rating.

## Savings Snapshot

### Changes that made a difference



#### Motion sensors

Create a dynamic environment that 'knows' when energy is required.



#### Cooling System

Chilled water cooling system upgraded and can now adapt to climatic conditions or building load profiles.



#### Temperature control

Upgraded the Building Management Control system to look at ambient temperature and relative humidity.

"I have nothing but praise for the team that enabled this energy solution. Complaints from the tenants, mainly about air conditioning, have dropped about 90 percent. Tenants' electricity bills have gone down."  
Lee Messenger, Building Manager.

235 Stanley Place had higher than expected electricity savings of

# 32%\*

\*Energy savings shown are from an independent auditor's measurement and verification, report conducted in 2011.

# Money Saving Choices

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## 'Business as usual' wasn't really an option

The owners of 235 Stanley Place needed to make significant changes in order to achieve the 5 Star Energy Efficiency rating required to ensure their federal government tenants could remain in the building.

An independent audit showed that the cooling system (an aging independent chiller plant with poor part-load performance efficiencies) accounted for more than 50% of electricity demand. Maximum demand and consumption was at its highest during peak periods. Meanwhile, tenants complained that it was too cold in some areas, and too warm in others due to an inconsistent air balance throughout the building. To cap this off, the lighting system was outdated and energy-hungry.



## Innovation exceeding expectation

A number of innovative changes were developed and implemented. Air conditioning was the most significant factor, so the chiller was upgraded to modern, high-grade screw chillers, which are more than 40% more efficient. Also, installation of desiccant de-humidification to outdoor air provided up to 70% recovery. Meanwhile, lighting systems were upgraded from two x 36W T8 to one x 28W T5 with high lighting output ratio fittings.



## Putting good ideas in motion

Motion sensors were used extensively to create a dynamic environment that 'knows' when energy is required based on known occupancy. The building 'sleeps' until the first person enters in the morning. Power systems on each floor are enabled and wait until people arrive before switching on lighting and ventilation.



## It all adds up to ongoing reward

Electricity savings of 32% have been achieved (the forecast was 26%) and demand savings of 567kVA have been made—and an independent auditor has concluded that energy savings have exceeded all expectations. The upgrade cost approximately \$1.85 million, however a Green Building Fund grant of \$500,000 has helped offset the cost. The work environment at 235 Stanley Place is now cleaner, healthier and more efficient than it was when it was opened in 1982.

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## Your turn

Go to “Save on your bill” at [ergon.com.au/your-business](http://ergon.com.au/your-business) to help you choose an energy efficiency consultant and take the first step towards reducing your energy costs.

