



Case Study
Commercial Office

321 Exhibition Street, Melbourne

Origin's Melbourne base at 321 Exhibition Street aims to be best practice in sustainability and energy efficiency through the design and installation of a state of the art trigeneration plant. The Cogent Trigeneration Plant delivers heating and cooling for the building's air-conditioning system. It also provides low CO2 emissions density electricity when compared to the grid.* This helps reduce Origin's carbon footprint.

Building Owner:	Cromwell Group
Location:	Exhibition Street, Melbourne
Building Description:	Commercial complex – premium offices & retail space
Building Size:	20 levels, 31,000 square meters
Plant Operational Date:	November 2011

Benefits

Energy Efficiency:

Minimum target of 4.5 star NABERS Rating.

5 Star (Version 3) Green Star Rating.

Getting multiple forms of energy from one fuel can result in an efficiency gain of up to 80% versus the grid average and compared to 38% for the best coal fired power station.*

Backup:

Provides emergency backup if grid connection fails. The plant is configured to operate either in grid parallel import or island mode and operates automatically during the peak and shoulder demand periods or during grid outages as emergency backup.

The plant will normally operate from 7am to 11pm, Monday-Friday.

Sustainability:

CO2 Reduction – Estimated savings of up to 3,000 tonnes of CO2 per annum.*



Plant Capacities

Peak Electrical:

1165 kW at 0.8 power factor

Peak Cooling:

750 kW

Peak Heating:

600 kW

Energy Efficiency:

80% overall efficiency (estimated)*

The plant utilises Acumen Metering to build superior reporting analytics and provide intelligence packages derived from meter data flows.

*www.cogentenergy.com.au; CO2 savings estimations are calculated based on information from the Australian Government's National Greenhouse Accounts Factors (June 2009). Calculation methodology externally reviewed by PAE Holmes.