

# Stockland HQ 133 Castlereagh St, Sydney

Cogent Energy has designed and installed a state of the art trigeneration plant on the rooftop of the Stockland headquarters located at 133 Castlereagh Street in Sydney. The site comprises of premium commercial office space and retail shops. Due to limited space within the existing plant room, a previously unused rooftop space has been utilised for equipment installation with an acoustic engine enclosure.

<b>Building Owner:</b>	Stockland
<b>Location:</b>	133 Castlereagh St, Sydney
<b>Building Description:</b>	Commercial complex - premium offices & retail plaza
<b>Building Size:</b>	35,000 sqm
<b>Plant Operational Date:</b>	1 February 2009

## Plant Capacities

**Peak Electrical:**  
772 kW at 0.8 power factor

**Peak Cooling:**  
475 kW

**Peak Heating:**  
412 kW

**Energy Efficiency:**  
80% Overall Efficiency (estimated)  
when compared to grid electricity

## Cogeneration Configuration

The Stockland HQ trigeneration plant comprises of a 772 kW MTU 4000 series engine that is connected in parallel to the grid. The engine is coupled to 475 kW Thermax exhaust absorption chiller and plate heat exchangers that provide 412 kW of heating capacity for the building space from the engine jacket water. The absorption chillers and heat exchangers are fully integrated into the building heating, chilled and condenser water systems.

The plant is set up to operate in grid parallel import and operates automatically during the peak and shoulder demand periods.

## Benefits

**Energy Efficiency:**  
4.5 star NABERS Base Building -  
5 star NABERS & 6 star Green  
Star Tenancy

**Sustainability:**  
Estimated savings of up to 2,000  
tonnes of CO<sub>2</sub> per annum<sup>1</sup>



<sup>i</sup> CO<sub>2</sub> 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.