

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.

Building Owner:	Stockland
Location:	133 Castlereagh St, Sydney
Building Description:	Commercial complex - premium offices & retail plaza
Building Size:	35,000 sqm
Plant Operational Date:	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 CO₂ per annum¹



ⁱ 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.