



Case Study
Commercial Office

200 Victoria Street, Melbourne

Cogent Energy has designed and installed a state of the art trigeneration plant at 200 Victoria Street, Melbourne. This building is the old CUB laboratory site that has been fully refurbished by the owner to house premium office space with small boutique retail shops.

Building Owner: Drapac
Location: Melbourne
Building Description: Premium offices & retail tenancies
Building Size: 8,500 sqm NLA
Plant Operational Date: December 2009

Plant Capacities

Peak Electrical:
386 kW at 0.8 power factor

Peak Cooling:
290 kW cooling / 230kW heating

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

Cogeneration Configuration

The 200 Victoria Street trigeneration plant comprises of a 386kW MTU Series 400 natural gas fired engine that is connected in parallel to the grid. The engine is coupled to a 290 kW Thermax exhaust absorption chiller and a 230kW heating water heat exchanger. The facility is fully integrated into the building's chilled, heating and condenser water systems.

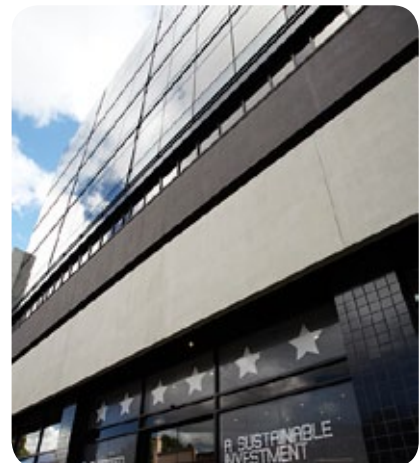
The plant is set up to operate either in grid parallel export or island mode and operates automatically during the peak demand periods or during grid outages as emergency backup.

Benefits

Energy Efficiency:
Building Targets - 5 star NABERS
and 6 star Green Star

Backup:
Provides emergency backup if grid
connection fails

Sustainability:
Estimated savings of up to 950
tonnes of CO₂ per annumⁱ



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.