Cogent Energy Case Study – 101 Miller Street, Sydney

Cogent Energy has designed and will soon commence installation of a state of the art cogeneration plant at 101 Miller Street, North Sydney. The building is one of the largest commercial buildings in North Sydney and comprises premium office space and retail shops. Project details include:

Building Owner: Mirvac

Location: North Sydney

Building Description: Commercial complex - premium offices & retail plaza

Building Size: 40,000 sqm

Plant In-service Date: 1 July 2008

Cogeneration Configuration

The 101 Miller Street cogeneration plant comprises 2 x 1,166 kW MTU 4000 series cogeneration engines that are connected in parallel to the grid. Each engine is coupled to a 750 kW Thermax exhaust absorption chiller. The absorption chillers are fully integrated into the buildings chilled and condenser water systems.

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

Plant Capacities

Peak Electrical: 2,332 kW at 0.8 power factor

Peak Cooling: 1,500 kW

Energy Efficiency: 80% (estimated)

Benefits

Energy cost savings: 10%

Reliability: Highly reliable parallel cogen solution with grid parallel import

Energy Efficiency: 5 star ABGR

Sustainability: Saving of up to 10,000 tonnes of CO_2 per annum.