



Case Study
Educational/Research

University of NSW, Sydney

Cogent Energy has designed and installed a state of the art cogeneration plant at the Lowy Cancer Research Center at the University of NSW Kensington campus. This site is one of the largest cancer research centres in the southern hemisphere.

Building Owner: University of New South Wales
Location: Kensington, Sydney
Building Description: Research centre – Tertiary Institute
Building Size: 16,500 sqm
Plant Operational Date: December 2009

Plant Capacities

Peak Electrical:
770 kW at 0.8 power factor

Peak Thermal:
410kW heating

Energy Efficiency:
70% Overall Efficiency (estimated)
when compared to the use of
Grid electricity

Cogeneration Configuration

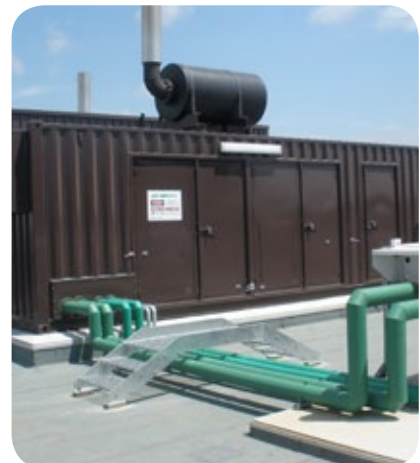
The UNSW cogeneration plant comprises of a 770kW MTU Series 4000 cogeneration engine that is connected in parallel to the grid. The engine is coupled to a 410kW heating water heat exchanger which provides heating hot water for use within the building. The Cogent facility is fully integrated into the building's heating water, BMCS and energy monitoring systems.

The plant is set up to operate in grid parallel and generates energy that is distributed and used throughout the UNSW campus via their onsite HV ring main. The facility operates automatically during the peak and shoulder demand periods.

Benefits

Energy Efficiency:
5 star Green Star

Sustainability:
Estimated savings of up to 1,600
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.