

# 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.

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

## Plant Capacities

<b>Peak Electrical:</b>	770 kW at 0.8 power factor
<b>Peak Thermal:</b>	410kW heating
<b>Energy Efficiency:</b>	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

<b>Energy Efficiency:</b>	5 star Green Star
<b>Sustainability:</b>	Estimated savings of up to 1,600 tonnes of CO <sub>2</sub> per annum <sup>i</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.