

TRI-GENERATION



The Minister for Resources, Energy and Tourism, Mr Martin Ferguson, formally launched the Canberra Airport's tri-generation plant at Majura Park on 2 December 2008.

The tri-generation plants use natural gas to power a 1,200kW gas generator to produce electricity. The excess heat, otherwise known as fugitive emissions, is captured to heat buildings in winter and then cool them in summer by using absorption chillers.

Hot water is also produced which is available for use as domestic hot water. The plant also can produce power that can be sold back to the grid as greener electricity or utilised in the buildings.

The production of electricity is a welcomed 'by product' of the design as the system was designed principally for its heating and cooling capacity.

Tri-generation plants reduce the pressure and reliance on the local black coal produced electricity grid.

The Majura Park and Airport Terminal tri-generation technology is designed to:

- Reduce carbon emissions by up to 75% compared to most office buildings and the minimum set by the Building Code of Australia (BCA) requirements;
- Reduce carbon emission by up to 55% compared to a 5 star NABERS (National Australian Built Environment Rating System) building;
- Far surpass the Commonwealth Green Lease Requirements of 4.5 star NABERS;
- Only emits around 32kg CO²/m²/year;

- Each plant to save between 1,000-2,400 litres of water per hour of operation when compared to energy produced from coal; and

- The energy produced by the tri-generation plant is 45% more efficient than coal powered electricity.

This reduction in emissions for each plant is more than 1,000,000 kilograms of CO² per year or equivalent to removing 360 cars from the road.

Canberra Airport proposes to expand tri-generation technology in the future growth of the Airport.