GREEN INFRASTRUCTURE
FOR SYDNEY

SYDNEY TRIGENERATION: THE BUSINESS ADVANTAGES

The City's trigeneration project will help insulate Council buildings, central Sydney businesses and all NSW electricity consumers from future electricity price rises. Power bills are expected to increase by 80 per cent in the five years to 2013-14.

The City of Sydney will be the first capital city in the nation to provide a low-carbon energy alternative. Trigeneration systems are already installed in city buildings owned by GPT Group, Stockland, Westfield, Investa and Mirvac . In April this year, property group Investa unveiled the nation's first networked trigeneration system, supplying electricity to its offices in North Sydney and the city centre.

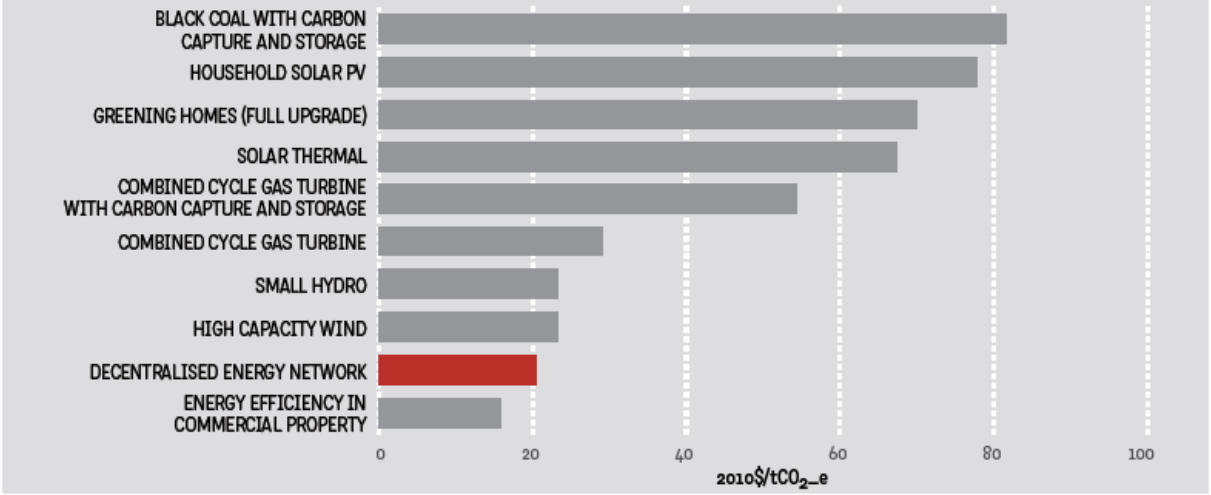
The City's plan takes this technology to the next level by connecting clusters of buildings to trigeneration to provide electricity, heating and air-conditioning. This network approach raises the energy efficiency of the system and will reduce carbon emissions in City buildings by an estimated 40 to 60 per cent.

Trigeneration systems are nearly three times more energy efficient than the coal-fired power stations that supply most of Sydney's power at present. As they produce electricity, heating and cooling close to where it is needed they avoid the high cost of transporting electricity from areas such as the Hunter Valley. These network charges make up 40 per cent of average power bills and are expected to rise to 60 per cent by 2013-14.

NSW energy companies will spend $17.4 billion to upgrade the electricity network over five years to 2013-14. This represents $2400 per person, or an 80 per cent increase on electricity prices over the previous five-year period.

A University of Technology study estimates the City's trigeneration project could achieve savings in deferred electricity network costs of more than $200 million by 2020, and upwards of $1 billion by 2030 while reducing greenhouse gas emissions by 40 to 60 per cent from 2006 levels. The report estimates that City trigeneration could fill much of the gap between electricity supply and demand and thus defer or avoid the cost of building new baseload power stations. Macquarie Generation and Delta Electricity have plans to build two new power stations at a cost of up to $7 billion. If they were coal-fired they would emit 23 million tonnes of carbon dioxide a year – 15 per cent of NSW's total greenhouse gas emissions, and four per cent for Australia overall.

FIGURE 28: MARGINAL SOCIAL COST OF ABATEMENT FOR A VARIETY OF EMISSIONS REDUCTION STRATEGIES



Source: The Allen Consulting Group (2010).

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CITY OF SYDNEY

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