

FACT SHEET and Q&As

Background

NSW Sugar Milling Co-operative and Delta Electricity formed a joint venture to construct and run two 30MW co-generation energy plants.

The plants, at Condong and Broadwater sugar mills, are fuelled primarily by sugar cane material and operate as power stations within the mills, which are owned by NSW Sugar.

Commercial operation of the plants began in November 2008. Each mill has been upgraded as part of the cogeneration project. All electricity generated is sold to Delta Electricity.

The project involves two 30MW base load renewable energy co-generation plants fuelled by sugar cane materials - bagasse (remnant fibre after the cane is crushed to produce sugar and cane leaf.)

This is power that is available 24 hours a day, seven days a week, year round. Other renewable energy sources, such as sun, wind, tides and waves cannot be controlled to provide continuous base-load power.

It is Australia's largest base load renewable electricity generation project and results in an annual saving of 400,000 tonnes of greenhouse gases.

The project has allowed for the staged move to green cane harvesting and will eventually lead to the elimination of pre and post harvesting cane burning which reduces air quality and causes unfavourable impacts on local communities.

The bagasse, cane trash and wood waste fuels used are categorised as eligible fuels under the Renewable Electricity Act. Other eligible fuels, such as camphor laurel, are being investigated.

Each co-generation plant will generate enough renewable electricity for about 30,000 average sized North Coast homes.

These plants offer a 'smarter' approach to electricity generation. They use a renewable fuel source, help reduce greenhouse gases, decentralise the supply of base load electricity and meet community expectations for cleaner energy.

When did construction commence?

The construction contracts were let in May 2005. Work on site started in December 2005 and completed by last quarter of 2008.

Who was appointed to do the work?

A consortium of Downer Engineering and Clyde Babcock Hitachi

How much did it cost?

The total cost of construction was about \$220 million.

How many people were employed to build each unit?

The peak labour force for the project was in July 2007 when 530 people were employed by the construction contractor across two sites. More than 1 million man-hours of construction labour in total at each site. Indirect man-hours are estimated at 600,000 man-hours at each site.

Additional labour during operations at each site is above 100,000 man-hours

What changes to practice and modifications were required?

- * Pre harvest cane burning discontinued to provide additional biomass for power generation;
- * New fleet of cane bins;
- * Modification of the sugar mills cane handling and crushing systems;
- * Design and installation of state of the art thermal power stations with auxiliary services and infrastructure;
- * Connection of the new power stations to the sugar mill and national electricity grid;
- * Installation of a reverse osmosis plant to produce recycled water.

What output is expected?

420 GWh per annum. The equivalent of power for 60,000 homes – enough power to provide 50% of Tweed valley needs and 25% of the Richmond Valley needs.

About Delta Electricity

Delta Electricity is a state-owned corporation producing electricity from several facilities using diverse energy sources, predominantly coal but also water and biomass materials. Most of its supply is generated by four power stations in New South Wales: Mt Piper and Wallerawang near Lithgow, and Vales Point and Munmorah on the Central Coast. These stations have a combined capacity of 4320 MW, which provides some 12% of electricity for customers in the National Electricity Market covering all Australian States and Territories except Western Australian and the Northern Territory.

The remainder of Delta's production is renewable energy. This is produced from mini-hydro facilities at Mt Piper near Lithgow, Chichester Dam in the upper Hunter Valley and Dungog wastewater treatment plant, biomass co-firing at Vales Point and Wallerawang power stations, and the two 30MW cogeneration plants using waste from milling sugar cane at Condong and Broadwater sugar mills. This is the largest base load renewable energy project of its kind, in Australia.

About the NSW Sugar Milling Co-operative Limited

NSW Sugar produces about 5% of the national sugar make, has about 600 members and more than 430 staff across three mill sites. The renewable energy generated at Condong and Broadwater provides another income stream for growers with the benefits likely to flow through to them in the next 2-3 years.