

**NEW
ZEALAND
GEOTHERMAL
ASSOCIATION
INC**

*East Harbour Management Services Ltd
PO Box 11-595, Wellington
New Zealand
Tel: 64-274-771 009
Fax: 64-4-473 9930
E-mail: brian.white@eastharb.co.nz
www.nzgeothermal.org.nz*

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Media Statement

Tuaropaki Power Company Officially Opens Geothermal Plant Extension at Mokai

On Saturday 25 February 2006, the Tuaropaki Power Company held their official opening ceremony for the Mokai Geothermal Power Station extension. The 39 MW extension brings the total Mokai output up to 94 MW. This power station alone will generate almost 2% of New Zealand's total electricity requirements, and will be in the nation's top 15 stations in terms of annual output. Tuaropaki Power Company will now be the 6th largest electricity generator in New Zealand. Geothermal power stations supply a reliable base load of generation that is independent of rainfall or wind.

The station is based around what is known as binary cycle technology. While geothermal steam does pass directly through a steam turbine, geothermal heat from steam and water is passed to a second "organic" working fluid that drives other turbines. Large banks of air-cooled heat exchangers are another feature of the station. The station was designed and built by Ormat of Israel and is similar to the Rotokawa station near Taupo, or to other designs internationally. The overall result is an efficient geothermal power station.

The station has a low profile sitting on farm land surrounded by low-lying hills. The station is not directly visible from main roads out of Taupo. The heat exchanger arrangements around the station mean that there is normally no direct release of geothermal steam at the surface. A small amount of carbon dioxide comes with the geothermal fluid and is vented above the cooling towers. The carbon dioxide emissions are about one sixth of that of a gas-fired combined cycle power station of the same MW output. Geothermal water and condensate are reinjected into the Mokai reservoir. The station is normally quiet and is not expected to disturb either the local farm workers or farming operations.

The Tuaropaki Power Company (TPC) was established as an independent generator by, and was wholly owned by the Tuaropaki Trust. The Tuaropaki Trust administers 2,700ha of Maori lands that overlie most of the Mokai geothermal field. The trust runs a successful pastoral farming operation and also has an interest in a large geothermally-heated glass house on its land. An emphasis has always been placed on the need for a sustainable geothermal operation that fits in with the existing farm and adds value.

There has been a long term relationship between TPC and state-owned generator Mighty River Power. Mighty River Power has an agreement to operate and manage the Mokai power station, and bought a 25% equity holding in TPC in 2003.

The New Zealand Geothermal Association congratulates Tuaropaki Power Company on the official opening of their Mokai geothermal power station extension.

There are many other geothermal fields in New Zealand that are currently untapped or underdeveloped, and that could potentially be developed assuming access and consenting is achieved. There is currently 450 MW of installed geothermal capacity in New Zealand, and geothermal stations supply 6 – 7% of our electricity demand. Geothermal energy is expected to make an even greater contribution to supplying New Zealand's increasing demand for electricity. Conservative estimates taking account of likely consent restrictions have indicated that more than 600 MW of new geothermal power stations could be installed. Some developers have spoken of 400 MW of geothermal power stations over the next 10 years.

Contact: Brian White (Executive Officer of the NZGA) phone 0274 771 009, email brian.white@eastharb.co.nz

The **New Zealand Geothermal Association (NZGA)** is an independent, non-profit industry association with a wide membership covering developers, regulators, researchers, consultants, Maori interests, suppliers, etc. It provides information on geothermal phenomena and utilisation for industry, government and educational organisations. The NZGA supports appropriate sustainable development of geothermal resources, and works with industry and government to achieve this.