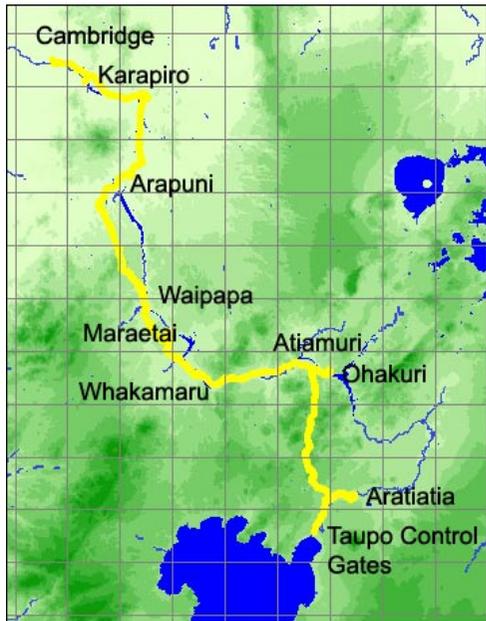


Waikato Hydro Chain

There are now several types of power station using the Waikato River, but the ones that got there first were those relying on the river itself for their energy source - the hydro stations. They receive little publicity now, but when they were being built they were symbols of the communal approach to economic activity once accepted without question in New Zealand. In architectural terms they are fine monuments to that era and they continue to play a significant part in the country's energy supply.

An Austrian refugee, Frederick Newman, who had been trained in Vienna and Paris and had worked in Moscow from 1932-37 contributed the splendid Maraetai Power Stations designs while another migrant, Christian Vallenduuk was responsible for the architecture at Ohakuri, Aratiatia, Waipapa and Atiamuri.

An interesting day trip can be made visiting each of the 8 hydro power stations that effectively capture the energy in the River's 1,100-foot (335 metre) descent from Lake Taupo to Cambridge. The one-way trip distance is just under 200km and allowing for stops to view the dams and power stations the journey takes up to 5 hours.



There are nine structures in all, for the starting point of the chain is a control structure at the outlet of the lake on the edge of the town of Taupo. Built in 1941 this allows control of the lake level over 5 feet, its natural range.

Proceeding down-river from south to north from Taupo, the stations then are:

Aratiatia (1959-64) 90 MW

Ohakuri (1956-61) 112 MW

Atiamuri (1953-59) 84 MW

Whakamaru (1949-56) 100 MW

Maraetai (1946-61) 360 MW (As peaking capacity)

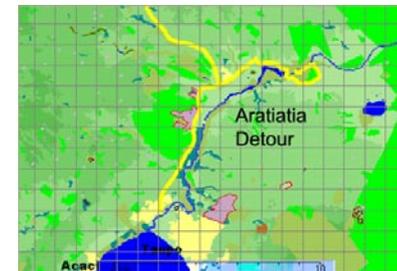
Waipapa (1955-61) 51 MW

Arapuni (1924-29) 158 MW

Karapiro (1940-47) 90 MW

The interesting views are on the downstream side of the dams where you can see the monumental power station buildings. Most of the stations are directly on the route but short detours are necessary to reach Aratiatia and Ohakuri.

Aratiatia is famous for its rapids. The generators are starved of water twice a day and the water diverted so that visitors can see the full flow of the river over the original falls. You may wish to time your journey to be at the rapids when this occurs at 10am and 2.30pm.





There is a small diversion at Atiamuri where unfortunately the growth of vegetation makes it difficult to get a good view.

Between Whakamaru and Maraetai lies Mangakino, the purpose-built town that served as construction headquarters for the hydro projects of the area. Once government-owned and managed by the then-Ministry of Works, it provided free house rentals to lure workers with families to this isolated spot. It is worth a detour if you are interested in glimpsing the living conditions of those who built the projects.

Now privately owned, with many derelict houses, it sits alongside the lake formed by the Maraetai Dam. It has long been promoted as a Taupo for those who cannot afford to live in Taupo.

The best view of Maraetai is from a viewing platform above the second power station, accessed from a road closed to traffic but only a short walk.



At Arapuni you can cross the river by the power station on the suspension footbridge originally built for the construction workers in 1924.



When Lake Karapiro was formed it drowned a station known as Horahora which had been built by the Waihi gold-mining company in 1913. The Horohora turbines famously continued to turn as the powerhouse filled with water.

At Karapiro there is a hydro museum.

Further Reading:

Andrew Leach, "Power Architecture", New Zealand Architecture, Nov/Dec 2002 p70.

John E Martin ed, "People Politics and Power Stations", Second edition 1998, Historical Branch, Department of Internal Affairs.