



# Hydro-Electric Generating Station

**Patea River**

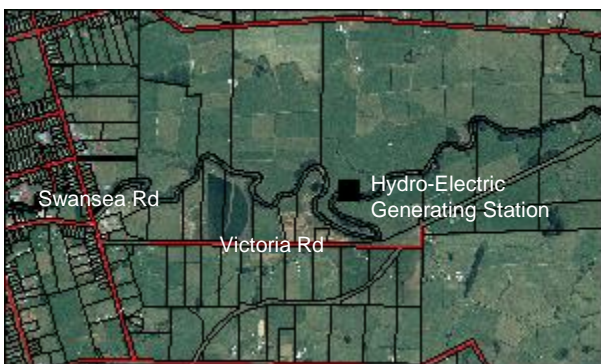
**1898**

**Use:** None  
**Materials:** Concrete  
**NZHPT Registered:** Not registered  
**Legal Description:** Pt Lot 11 DP 1942 Pt secs 20  
 21 118 BIKII Ngaere SD

**Historic Value:** 3 out of 5  
**Architectural Value:** - out of 4  
**Technical Value:** 1 out of 2  
**Symbolic Value:** 1 out of 3

**Rarity Value:** - out of 2  
**Townscape Value:** - out of 2  
**Group Value:** - out of 2

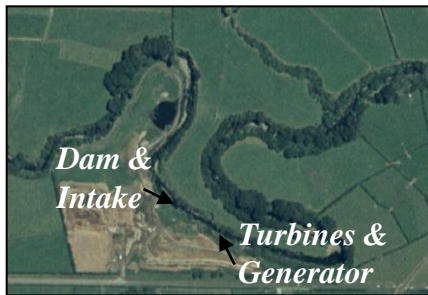
**Overall Heritage Value:** 5 out of 20



In about 1898, the Town Board was considering the installation of lighting in Stratford. There were two possible methods of this - gas or electric - and it was decided to put it to the community to choose between the two. It had seemed that the watergas option was inevitable until local man A.W. Reid, known for his entrepreneurial ability, offered another option.

As a result, a big meeting was held in the Town Hall and demonstrations were put on. A Balclutha man, Mr. Watt, presented the water gas-powered lamps to show how these would work and the kind of light people could expect from them. Then A.W. Reid stepped forward with Adam Porter (of Cardiff), and proceeded to give a display showing the benefits of cooking with electric power and finally having rigged up some large lights he flicked the switch and lit the entire room up in brilliant light. This proved to be highly successful as community members were quick to choose the electricity option. This meant that the Town Board accepted A.W. Reid's proposal to supply electricity to the town.

A.W. Reid consequently set about organising financial backing and formed the Stratford Electrical Supply Company in 1898.



This was the beginning of the Hydro-Electric Generating Station on the Patea River. The Generating Station was established on the U-bend of the River (*aerial view, pictured to the left*). It began on a straight part of the river, with a dam and water intake. The water was taken in through the tunnel that was approximately 100 yards long and also had a surge chamber. The surge chamber was simply a three foot pipe opening allowing for an even flow of water through the tunnel. The out-

let was further around the river, about 12 feet above the turbines. The two pen-stocks were of riveted metal and formed a 90 degree bend directing the water into the turbines, which drove the alternators that had been imported from England.

Apparently, the old generator used to be stored under Kings Theatre in Stratford. That way it could be brought out and put back into use when necessary. Unfortunately it no longer exists, as it met the fate that many things did during WWII, and was melted down for the war effort.

The plant produced a single-phase alternating current at 2,200 volts and had a capacity of 90 kilowatts. In town it was then transformed down for supply to consumers at 105 volts.



Stories have been told about the jobs workers at the station had to do. One such anecdote is about the cover over the intake (*what remains of the intake is indicated by the row in the picture above*) that was used when the plant was not in use. The cover was a wooden door-like attachment, however, it did not completely stop the water coming in because it was not quite large enough. Consequently a young boy would be sent up the tunnel with some wood, probably entering through the surge chamber, and he would have to crouch at the door and hammer more wood on to the bottom, from the inside. This would have been no easy task, knowing the extreme water pressure on the door from the other side!

In 1916, the Stratford Borough Council purchased the company's undertaking and this was financed by a \$32,000 loan.

The Council then supplemented the Hydro-Electric Generating Station with a Diesel Driven Generating Plant. These systems in place, the Council had sufficient power for its own requirements until the formation of the Taranaki Electric Power Board took place.

In December 1924, the Council opted to enter into a contract with the Board to take power once the Motukawa Power Station was operating. Consequently they had to change the Stratford reticulation system to a three-phase supply at 6600 volts to fit in with the Board's power supply.

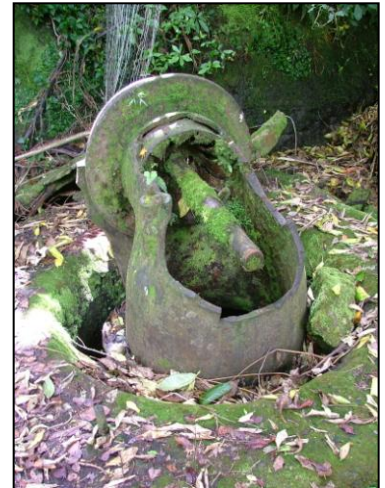
So, with the change over to the 230 volt system in place, the hydro and diesel plants were both phased out. In 1887 Reefton became the first town in New Zealand to light their streets, however, Stratford can be proud to have been the first Taranaki town and the second or third in New Zealand to institute a public supply of electricity. There is some debate over whether Wellington was before or after Stratford, and depends a lot on who you ask. Some give Wellington's date as 1888 and others 1889, but A.W. Reid's grandson has been quoted as querying whether Wellington's supply was truly 'public' or if it was used only for trams at first and expanded to encompass street lighting later.

Interestingly, a fact which seems to be unknown to many, is that in the early 1900's the Hydro-Electric Generating Station was used to power Mr. Clemow's farm. This is likely to have made it the first dairy farm in Taranaki (and perhaps even New Zealand) to have electricity.



What remains today gives evidence of the high-powered plant that once was.

The dam has gone, but railway-irons and part of the intake remains



(pictured on the previous two pages). There is a large cover over the old surge chamber now (pictured to the right) and the penstocks have gone. One broken turbine remains but the better of the two is now at Stratford's Pioneer Village. The district is very fortunate to have an exciting extant part of Stratford, and indeed New Zealand's, hydro-electric history.

## Bibliography

- The First Fifty Years – Jubilee History of the Taranaki Electric Power Board 1922-1972*  
New Zealand Historic Places Trust  
*Stratford District Centenary: 1878-1978*  
Puki Ariki: Taranaki Stories "Invenor A. W. Reid Leads The Way", Virginia Winder (08.05.03)  
*Taranaki Herald*, 22 Nov. 1938