

Fisher

Power Station

Mersey-Forth Catchment

Fisher Power Station is the second in the Mersey-Forth Scheme. The power station was commissioned in 1973 and houses a single Fuji Pelton turbine coupled to an Andritz alternator.

The power station is located in the upper reaches of the Fisher River. It is supplied with water from Lake McKenzie, as well as run-off from the plateau and by water pumped from Yeates Creek and Parsons Falls pumping stations. Water flows to the power station through a 6.5 kilometre-long flume, siphon and canal and then a 5.2 kilometre-long vertical shaft, inclined shaft, tunnel and surface penstock.

The Pelton turbine has fully embedded distributor pipework with the spear deflector control system designed to reduce penstock pressure rise by ensuring that flow changes are linear.

When the power station was upgraded in 2015 a new Andritz alternator was installed as well as digital control and excitation systems.

No hilltop valve is provided for the surface penstock but a vertical lift, gravity closed emergency gate is provided at the tunnel intake designed to cut off full flow. A turbine main inlet valve is installed in the power station.

Fisher Power Station output is fed through an 11 kV air-blast circuit breaker to TasNetworks' transmission grid via an 11 kV/220 kV generator transformer T1 and a second transformer T2, accepts the station 22 kV output from Rowallan Power Station.

The 22 kV local supplies are housed in Fisher Power Station and supply the headworks including Yeates Creek and Parsons Falls pump stations. This supply can be paralleled to the Aurora owned Railton no. 3 feeder if required.

Fast facts

Scheme:	Mersey-Forth
Year commissioned:	1973
Power station structure:	<ul style="list-style-type: none"> • 2 m long x 16.5 m wide • Assembly bay and service block at the downstream end of the building
Static head:	649 m
Generating set:	<ul style="list-style-type: none"> • Vertical shaft generating set • 46 MW four nozzle spear Pelton turbine directly • Turbine is coupled to a 3-phase, 50 Hz, 48 MVA synchronous generator and with provisions for synchronous compensator operation
Turbine manufacturer:	Fuji
Generator manufacturer:	Andritz
Rated head:	603 m
Rated output:	48 MVA
Rated discharge:	9 m ³ /s
Power factor:	0.9
Rated speed:	500 rev/min
Rated voltage:	11 kV

