

Power Station

Mersey-Forth Catchment

Paloona Power Station is the seventh and last station in the Mersey-Forth Scheme. The power station was commissioned in 1972 and houses a single Andritz Kaplan turbine coupled to a Siemens generator.

Paloona Power Station is located on the Forth River at the foot of Paloona Dam. The rock-fill, concrete face dam has a side channel spillway and is fed from the outflow of Devils Gate Power Station.

The turbine has a concrete spiral casing and is connected to a short penstock under the dam with a vertical lift, gravity closed intake gate designed to cut off full flow. Draft tube bulkhead gates and a gantry are located outside the power station to permit the draft tube to be dewatered.

As part of the Kaplan program, the power station underwent a major upgrade in 2014. This included a full disassembly, a runner replacement to a new more efficient Andritz design, as well as new digital control, excitation and protection systems.

A riparian outlet pipe with regulating valve is installed to control water flow into the Forth River and the rest of the scheme when the power station is not operating.

The power station output is fed to TasNetworks' transmission grid via an 11 kV/110 kV generator transformer and 110 kV outdoor switchgear. The transformer yard is situated adjacent to the station. A separate switchyard shared with TasNetworks is a short distance away.



Fast facts	
Scheme:	Mersey-Forth
Year commissioned:	1972
Power station structure:	 31 m long x 17 m wide Service block adjacent to the assembly bay
Static head:	32 m
Generating set:	 Vertical shaft generating set: 30 MW Kaplan turbine Coupled to a 3 phase, 50 Hz, 35 MVA synchronous generator
Turbine manufacturer:	Andritz
Generator manufacturer:	Siemens
Rated head:	31 m
Rated output:	35 MVA
Rated discharge:	106 m3/s
Power factor:	0.8
Rated speed:	188 rev/min
Rated voltage:	11kV



