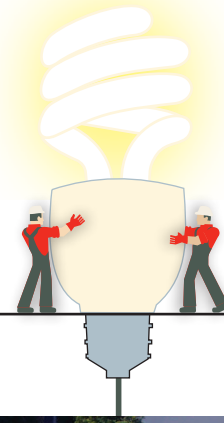


# Wilmot Power Station

## Mersey-Forth Catchment



Wilmot Power Station is the fourth station in the Mersey-Forth scheme. The station was commissioned in 1971 and houses a single Fuji francis turbine coupled to a Siemens generator.

Wilmot Power Station is located on the foreshore of Lake Cethana and is supplied with water from Lake Gairdiner. Water flow to the station is via an intake structure located a short distance from the dam face, through a power tunnel, pipeline and surface penstock.

The turbine has a fully embedded spiral casing with a special rotary inlet valve. A relief valve connected upstream of the inlet valve is designed to prevent overpressure in the penstock and also to be used as a bypass to release water to Lake Cethana when the machine is not operating.

At the draft tube outlet a weir maintains the correct tail water level when Lake Cethana is drawn down. Draft tube bulkhead gates, handled by an electrically operated monorail hoist, are located outside the station.

The station output is fed to Transend Networks' transmission grid via an 11 kV/220 kV generator transformer to the outdoor switchyard.



<b>Scheme:</b>		Mersey Forth	
<b>Year commissioned:</b>		1971	
<b>Power station structure:</b>		Surface, 31 m long x 15 m wide with the service block annexed to the assembly and machine bays.	
<b>Static head:</b>		252 m	
<b>Generating set:</b>		Vertical shaft generating set comprising a 32 MW francis turbine directly coupled to a 3 phase, 50 Hz, 34 MVA synchronous generator.	
<b>Turbine manufacturer:</b>	Fuji	<b>Generator manufacturer:</b>	Siemens
<b>Rated head:</b>	241 m	<b>Rated output:</b>	34 MVA
<b>Rated discharge:</b>	15 m <sup>3/s</sup>	<b>Power factor:</b>	0.9
<b>Rated speed:</b>	600 rev/min	<b>Rated voltage:</b>	11 kV

