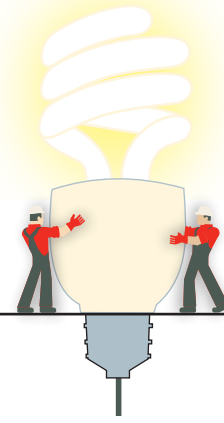


# Devils Gate Power Station

## Mersey-Forth Catchment



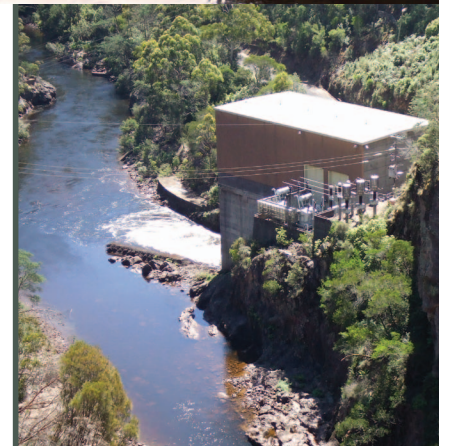
Devils Gate Power Station is the sixth station in the Mersey-Forth scheme. The station was commissioned in 1969 and houses a single Boving francis turbine coupled to a Siemens generator.

The facilities at Devils Gate are a double arch concrete dam (which forms Lake Barrington), an intake structure with intake gate design to cut off full flow, a 150 metre-long penstock tunnel, power station building, generator equipment and associated facilities.

The turbine has a partially embedded spiral casing. No relief valve or inlet valve is installed in the station.

The draft tube gate is designed to be removed by the station crane.

The station output is fed to Transend Networks' transmission grid via two 3-phase 11 kV/110 kV generator transformers and outdoor switchyard. The switchyard is adjacent to the station.



<b>Scheme:</b>	Mersey Forth		
<b>Year commissioned:</b>	1969		
<b>Power station structure:</b>	Surface 32m long x 17m wide with a service block adjacent to the assembly.		
<b>Static head:</b>	69 m		
<b>Generating set:</b>	Vertical shaft generating set comprising a 63 MW francis turbine directly coupled to a 3-phase, 50Hz, 75MVA synchronous generator and with provisions for synchronous compensator operation.		
<b>Turbine manufacturer:</b>	Boving	<b>Generator manufacturer:</b>	Siemens
<b>Rated head:</b>	68 m	<b>Rated output:</b>	75 MVA
<b>Rated discharge:</b>	102 m <sup>3</sup> /s	<b>Power factor:</b>	0.8
<b>Rated speed:</b>	167 rev/min	<b>Rated voltage:</b>	11 kV

