

# Trevallyn Power

## Station

### yingina / Great Lake - South Esk Catchment

Trevallyn Power Station, located five kilometres from the centre of Launceston, was commissioned in 1955. Trevallyn dam on the South Esk River diverts water through a 3.2 kilometre tunnel to the station. Water is discharged into the Tamar River at sea level by an open tailrace channel. Trevallyn is what we call a run-of-river station making use of daily flows down the South Esk River.

The station has four turbines (two 20.9 megawatt and two 27 megawatt Francis-type turbines) with a combined generating capacity of 95.8 megawatts.

There is a valve immediately upstream of each turbine in case it needs to be shut off for maintenance and security purposes.

Energy the turbines generate is fed into the 11 kV bus system then on to the two 11 kV/110 kV 3-phase generator transformers which are in the switchyard on the south side of the station. The energy is then fed on to the TasNetworks' transmission grid.



Turbines inside the power station

#### Fast facts

<b>Scheme:</b>	South Esk Catchment
<b>Year commissioned:</b>	1955
<b>Power station structure:</b>	<ul style="list-style-type: none"> <li>72 m long x 14 m wide housing four generating sets with assembly bay.</li> <li>A two storey services block including control wing and workshop is annexed to the machine and assembly bay.</li> </ul>
<b>Static head:</b>	127 m
<b>Generating set:</b>	<p>Four vertical shaft generating sets:</p> <ul style="list-style-type: none"> <li>Two comprising a 20.9 MW Francis turbine directly coupled to a 3-phase, 50Hz, 25 MVA synchronous generator with provisions for synchronous compensator operation</li> <li>Two comprising a 27 MW Francis turbine directly coupled to a 3-phase 50Hz, 30.6 MVA synchronous generator.</li> <li>All turbines have fully embedded spiral casings.</li> </ul>
<b>Turbine manufacturer:</b>	English Electric
<b>Generator manufacturer:</b>	2x Alstom, 2x English Electric
<b>Rated head:</b>	41 m
<b>Rated output:</b>	25 MVA / 30.5 MVA
<b>Rated discharge:</b>	21 m <sup>3</sup> /s / 28 m <sup>3</sup> /s
<b>Power factor:</b>	0.8 / 0.87
<b>Rated speed:</b>	375 rev/min
<b>Rated voltage:</b>	11 kV