

WATER USAGE AND THE BELL BAY PULP MILL PROJECT

Water usage and the Bell Bay Pulp Mill Project tends to generate a lot of discussion and has done since the Project was announced. In the final analysis, the outcome is a very positive one for the State, as all of the water required by the Project will be taken from the water already being directed to the Trevallyn Power Station. Consequently the facts include:

- **No reduction in environmental flows through the Cataract Gorge,**
- **No reduction in domestic water available to the people of Launceston and**
- **No reduction in the tourism and recreation value of the Cataract Gorge.**

The facts are...

Trevallyn Dam overview

Trevallyn Dam was constructed on the South Esk River in 1955 and forms Lake Trevallyn, part of Hydro Tasmania's Great Lake- South Esk Power Generation Scheme. The Great Lake and Arthurs Lake in the central highlands, together with the Tods Corner and Poatina Power Stations, are also part of this same system. The overall catchment encompasses some 9,000 square kilometres, or 12% of the State.

Water held by Lake Trevallyn has 3 main final applications:

1. The provision of base environmental flows through the Cataract Gorge,
2. A part of the Tamar Valley's municipal water supply system and
3. Electricity generation via the Trevallyn Power Station.

Items 1 & 2 are prioritised flows, and item 3 utilises the remainder. The Lake itself is also a valued recreational area for a range of aquatic pursuits.

Lake Trevallyn has a comparatively small capacity to store all South Esk flows and so it is reasonably common to see flood events, resulting in a 'spill' flow over the Trevallyn Dam and down the Cataract Gorge.

The Trevallyn Dam and Power Station is a "run of the river" system having very little water storage capacity, so the daily flows must be either used or 'lost' through a dam spill event. Some flow control is however achieved by coordinating discharge of the Poatina Power Station upstream.

Lake Trevallyn water allocations

The current base environmental flow through the Cataract Gorge is 2.5 cumecs¹. In times of flood, the volume of water spilling over the dam can be much higher, resulting in torrents of white water raging through Cataract Gorge; an amazing spectacle, attracting locals and visitors to the area.

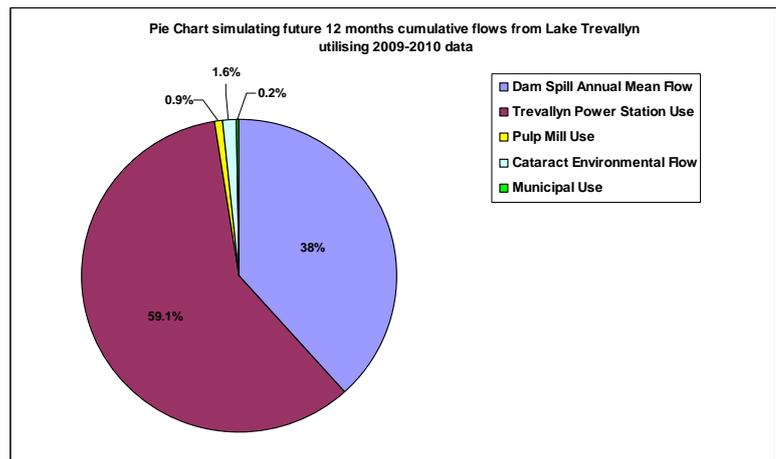
¹ A cumec is a unit of flow - one cubic metre per second.

Water Usage and the Bell Bay Pulp Mill Project continued

The majority of the water which flows into Lake Trevallyn is however diverted to electricity generation. For example, from data provided by Hydro Tasmania to

Gunns in 2010 showed that an average of 56.4 cumecs of water flowed through the Trevallyn Power Station and into the River Tamar, over a representative 12 month period. The *maximum generation* capacity of Trevallyn Power Station is 95.8 Mega Watts (MW) from a maximum rated discharge flow of 98 cumecs. By comparison, the pulp mill's average daily water consumption will be 0.87 cumecs and water taken for municipal use in the Tamar Valley runs at an average of 0.15 cumecs.

The pie chart to the right represents the proportion of 12 months flow from Lake Trevallyn. The Bell Bay Project's projected relative proportion (had it been operating) is shown by the green wedge. In the absence of a pulp mill (as now), the mill's proportion would simply revert back to the power station.



So, what about energy generation capacity lost?

The Bell Bay Project's off take represents less than 2% of the *Trevallyn Power Station's* usage and so it will reduce Trevallyn's energy output by about the same proportion. The Bell Bay Project will pay Hydro Tasmania a market based fee for water which includes a component that recognises any lost generating capacity.

Bell Bay Energy – the big benefit!

Many people also misunderstand the Bell Bay Project's overall impact on energy. The Bell Bay Project meets the definition of a 'bio-refinery'. In simple terms, this means it will produce multiple products for sale from a biologically produced feed stock. The two main saleable products are:

- Bleached Harwood Kraft Pulp, sold on international pulp markets
- Green electrical energy sold onto the National Electricity Market grid.

The water purchased from the Hydro will facilitate downstream generation of a further 180 MW of renewable green energy at the Bell Bay mill. This is twice the total generation capacity of the Trevallyn Power Station. It also represents an approximate 100 times gain in net energy delivery to the grid from the better utilisation of this small portion of the South Esk's flow.

In summary, there will be a huge net benefit to the community from the overall increase in 'green energy' that will be generated by the Bell Bay Project.