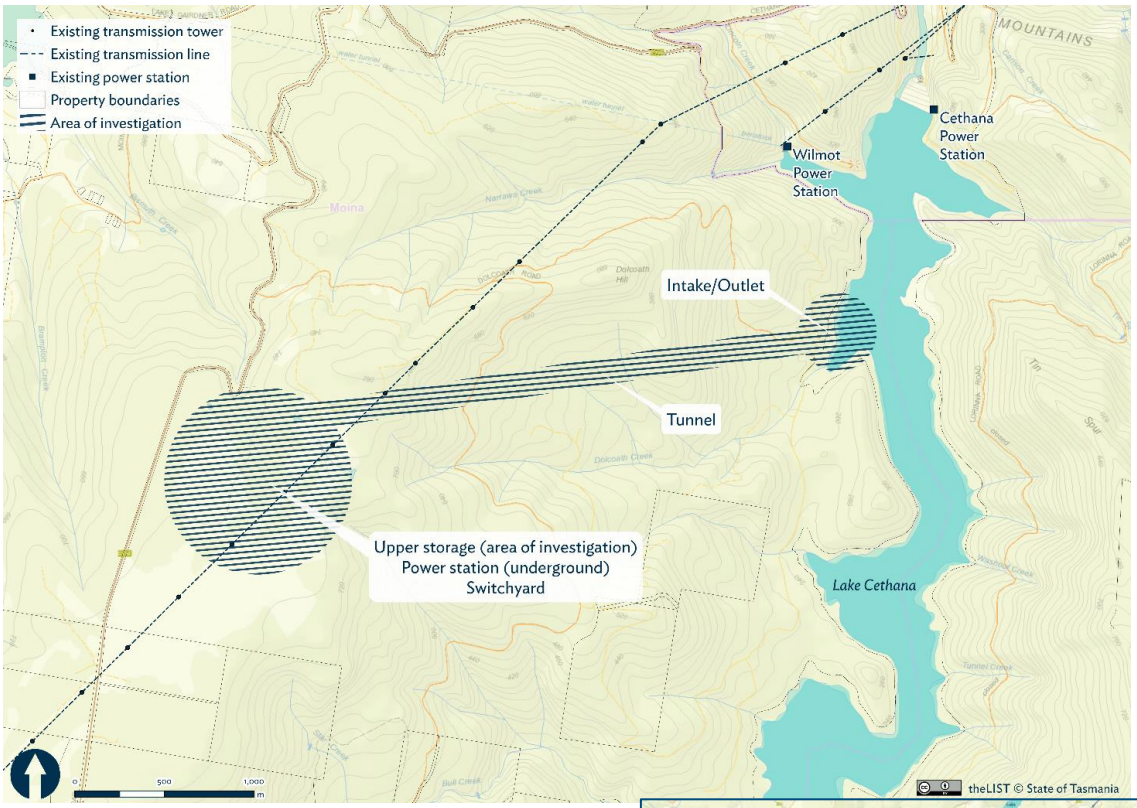
# Lake Cethana pumped hydro potential

Coal is retiring, and new sources of renewable energy like wind and solar are cheap and becoming more plentiful. But they are variable so energy storage is needed to help fill the gaps and maintain the reliability and stability of our electricity supply. That's where Tasmania can help!

Hydro Tasmania's studies have found significant pumped hydro development potential in the state. We have been looking at 14 options that represent ~4800 megawatts of reliable, cost effective capacity.

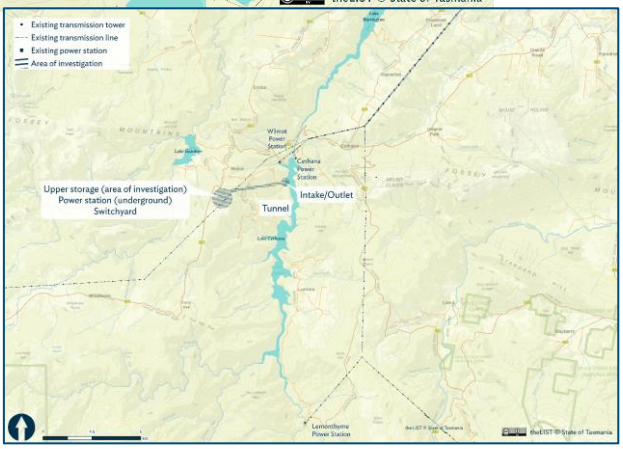
Lake Cethana, Lake Rowallan and Tribute pumped hydro opportunities are now in the next stage of assessment and we're taking a closer look at their potential. The outcome will be a preferred project that could be ready to operate when 1200MW of additional Bass Strait interconnection comes online.

## What's being investigated at Lake Cethana?




This option involves:

- A new off-river upper storage on the western side of the Lake, linked by underground tunnels to Lake Cethana as the lower storage.
- An underground pumped hydro power station at the lower end of the water conveyance tunnels.
- A new transmission line connection from the proposed Cethana switchyard to Sheffield Substation, using existing easements where possible.



# Lake Cethana pumped hydro potential

| Key facts and estimates – Lake Cethana* | |
|---|---|
| **Capacity** | 600MW |
| **Duration** | 11 hours |
| **Upper storage volume** | ~ 5 Gigalitres |
| **Volume in Olympic pools (2.5 megalitres)** | ~2000 |
| **New upper storage area** | 50 – 70 Hectares |
| **Upper storage wall height** | Varies up to 25 metres |
| **Water conveyance tunnel length** | 3,500 metres |
| **Tunnel diameter** | Up to 8.5 metres |
| **Cost per MW to build** | $1.50M/MW* |
| **Construction cost estimate** | $900M* |

**Estimates are from pre-feasibility assessments and include contingency. These estimates are subject to further investigation and assessment through the feasibility study.*

## What's next?

The feasibility study is about gathering detailed information that lets us select the first site that can progress. The studies undertaken during the feasibility stage include:

- Geological and geotechnical studies
- Environmental and heritage investigations
- Stakeholder and community consultation on potential project impacts, benefits and mitigation measures
- Engineering design and constructability
- Transmission and connection studies.

Three sites will be investigated initially and one of those sites will be selected during 2020 to proceed into a development stage. Any site that is selected to proceed to development stage will be subject to statutory approvals processes and comprehensive community consultation during the advanced feasibility and development approvals stage.

### Contact us

We welcome views from the Tasmanian community and will continue to keep you informed as studies progress. You can reach us on 1300 360 441 or pumpedhydro@hydro.com.au

The latest information is available at www.hydro.com.au/clean-energy/battery-of-the-nation.

Pre-feasibility activity received funding from ARENA as part of ARENA's Advancing Renewables Program.