

COMMUNITY INFORMATION SHEET • RENEWABLES DEVELOPMENT

Hydro and pumped hydro

Old schemes, new roles — generation upgrades and the giant batteries made of water

The key idea: water is the grid's deep storage

Wind and solar need a partner that can store energy for hours or days and release it on demand. Hydro is that partner and it's central to the pitch for hosting digital infrastructure in hydro-rich regions like Tasmania, where **data centres can contract long-duration clean supply** that solar-plus-batteries alone can't yet match.

Two different machines

Conventional hydro generates when water flows downhill through turbines, with output limited by rainfall and storage levels. **Pumped hydro** is a storage loop: pump water uphill when power is cheap and plentiful, release it when the grid needs it. Pumped hydro doesn't create energy; it stores it, typically returning about three-quarters of what it consumes. But it stores *a lot*, for far longer than grid batteries.

New value from old schemes

Australia's biggest near-term hydro gains come from **upgrading existing schemes**, not just new dams. Tasmania's 85-year-old Tarraleah scheme is being redeveloped, with intake excavation complete and tunnelling well advanced in 2026, lifting capacity toward ~190 MW and, importantly, making it more flexible for a renewables-dominated grid. Modernising turbines, intakes and control systems across old schemes buys capacity and flexibility with a fraction of a new project's footprint and approval risk.

And new storage

New pumped hydro is also coming: Snowy 2.0 is under construction in NSW and Hydro Tasmania's **Cethana** project (around 750 MW with ~20 hours of storage) entered Commonwealth environmental assessment over 2025–26. Pumped hydro projects are big civil works: years of construction, hundreds of workers and real local impacts on roads, lakes and towns, with the benefits spread across the whole grid. That's the same fairness structure as transmission and it deserves the same honesty. (*Project status current at July 2026.*)

What good practice looks like

- Upgrades to existing schemes preferred and assessed before greenfield sites.
- Lake levels, flows and downstream effects modelled independently and published.
- Construction impacts (roads, housing, workforce) planned with councils before approval.
- Host communities share in long-term value, not just construction-phase activity.

Questions to ask

Is this an upgrade or a new footprint? What changes for lake users, downstream flows and fish? What does the construction peak mean for our roads and housing? What lasting benefit stays local once the workers leave?

Want to know more? Hydro Tasmania and Snowy Hydro publish project pages and fact sheets; ReCFIT tracks Tasmania's major energy projects. *Last checked: July 2026.* This sheet is general information, not legal or planning advice; a specific proposal is confirmed by qualified assessment.