

Power generation

Power stations

Engineering
Fact sheet 2



Overview

The Snowy Scheme consists of eight hydro-power stations including two that are underground, plus one mini hydro station. The hydro-power stations comprise of 33 turbines with a total generating capacity of 4,215 megawatts (MW) and produce on average, 4,500 gigawatt-hours of renewable energy each year.



Power Generation Turbines Fact Sheet

Tumut 3 Power Station

The Tumut 3 Power Station was the **first** major pumped-hydro facility in Australia and is still the largest.

Concrete station

Completed in **1973** and upgraded in **2012**

1,800MW generating capacity

600MW pumping capacity

Consists of six units

Six vertical shaft generators

Six vertical shaft francis type turbines

Three pumps each with a capacity of 99.1 m³/s

Nine in operation and one spare single-phase oil-filled, water-cooled transformers



Tumut 3 Power Station

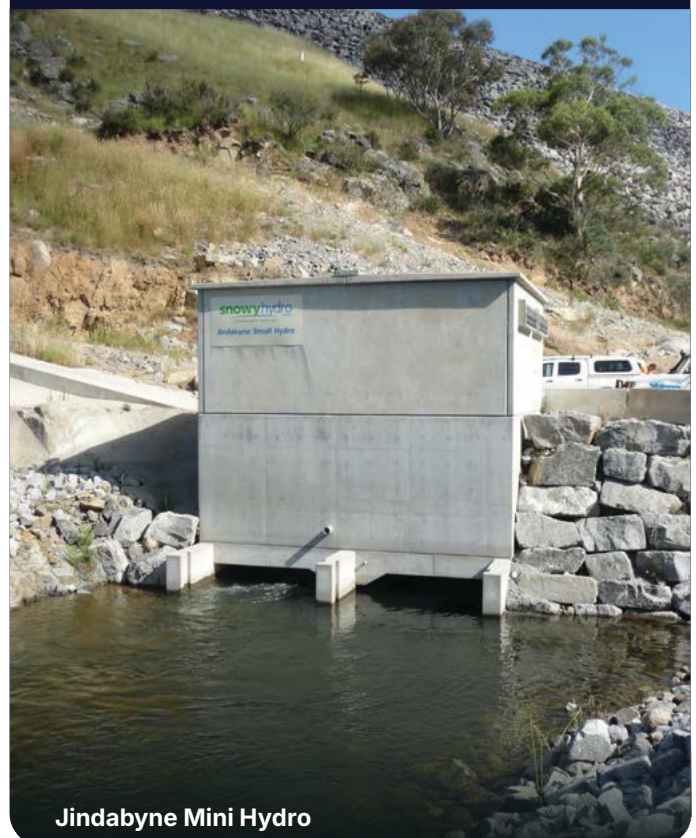
Jindabyne Mini Hydro

Jindabyne Mini Hydro was built onto Jindabyne Dam to **capture wasted energy from water releases**.

Completed in **2009**

1MW generating capacity

Consists of one unit



Jindabyne Mini Hydro

Jounama Small Hydro

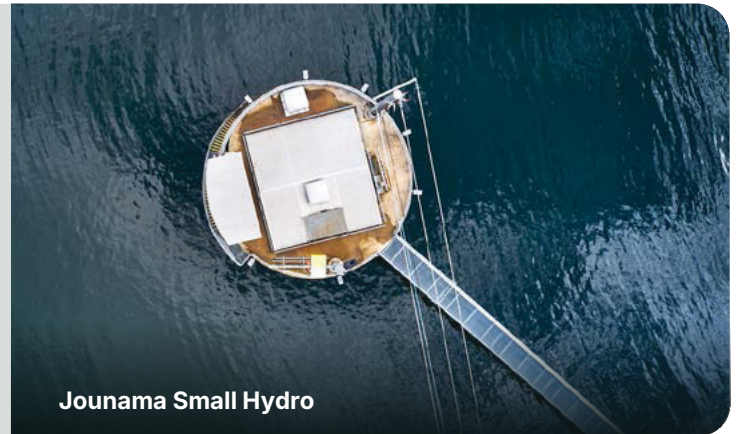
Jounama Small Hydro was built on Jounama Dam to **capture wasted energy from water releases**.

Completed in **2010**

14MW generating capacity

Consists of one unit

- Kaplan turbine installed horizontally



Jounama Small Hydro

Tumut 1 Power Station

Excavated machine hall and transformer

Completed in **1959** with current upgrades in place

330MW generating capacity

Consists of four units

- Four vertical shaft generators
- Four vertical shaft francis type turbines
- Seven single-phase oil-filled, water-cooled transformers



Tumut 1 Power Station

Tumut 2 Power Station

Excavated machine hall and transformer

Completed in **1962**

287MW generating capacity

Consists of four units

- Four vertical shaft generators
- Four vertical shaft francis type turbines
- Seven single-phase oil-filled, water-cooled transformers



Tumut 2 Power Station

Different types of hydro-electric turbines



Pelton Wheel



Francis Reaction Turbine



Kaplan Turbine



Murray 1 Power Station

Murray 1 Power Station

Concrete station

Completed in **1967** with current upgrades in place

950MW generating capacity

Consists of 10 units

- 10 vertical shaft generators

- 10 vertical shaft francis type turbines

- Seven single-phase oil-filled, water-cooled transformers

- 16 main transformers with 15 in service and one spare



Murray 1 Power Station

Murray 2 Power Station

Concrete station

Completed in **1969**

550MW generating capacity

Consists of four units

- Four vertical shaft generators

- Four vertical shaft francis type turbines

- Six in service and one spare single-phase oil-filled, water-cooled transformers



Murray 2 Power Station

Guthega Power Station

Guthega Power Station was the first power station in the Snowy Scheme to be commissioned. It supplies energy for destination to both NSW and VIC.

Concrete station

Completed in **1955**

60MW generating capacity

Consists of two units

- Two vertical shaft generators

- Two vertical shaft francis type turbines

- Two three-phase transformers



Guthega Power Station

Blowering Power Station

Concrete station

Completed in **1968**

80MW generating capacity

Consists of one unit

- One vertical shaft generator (umbrella type)

- One vertical shaft francis type turbine

- One three-phase oil-filled, water-cooled transformer



Blowering Power Station