



**OVEN MOUNTAIN**  
PUMPED HYDRO STORAGE

## Oven Mountain Pumped Hydro Energy Storage Project

The Oven Mountain project is an ‘off river’ pumped hydro energy storage development located adjacent to the Macleay River between Armidale and Kempsey.

Situated within the New England Renewable Energy Zone, the project will provide clean energy generation and storage capabilities, ensuring a reliable, resilient, and renewable future energy supply for NSW.

The Oven Mountain project will include the construction of upper and lower reservoirs; an underground hydroelectric power station; spillways; power waterway, and access tunnels.

The project will also include the construction of a new electricity transmission network from the generation site to the Lower Creek area. Additional and independent upgrades to the broader existing electricity transmission network will be required to accommodate the project.

Additionally, the project will include upgrades to existing local and regional roads, allowing for safe construction and operation access.

### Project History

The Oven Mountain project has a rich history, with close ties to the community. The idea for the project originated several decades ago with Bob Hayes, a local engineer and landowner. Bob saw the potential in the site and completed preliminary designs and investigations. Today’s project builds on Bob’s hard work and his family’s connection to the land.

The New England area has some of the State’s best potential sites for pumped-hydro development. Favoured for its steep terrain, proximity to water, natural land formations, and access to the electricity network, the Oven Mountain project will play an important part in providing clean and reliable energy across NSW.

The steepness of the landscape gives enough height, over a short distance, to provide the gravitational pressure required to drive hydroelectric turbines. The project can support multiple turbines that will generate up to 900 megawatts over a 12-hour period.

The Oven Mountain project was declared Critical State Significant Infrastructure in 2020. The team is now completing site and field investigations, design work, and community consultation as part of the NSW Government’s environmental approval process, leading to the development of an Environmental Impact Statement.

# How does Pumped Hydro Energy Storage work

## GENERATING MODE

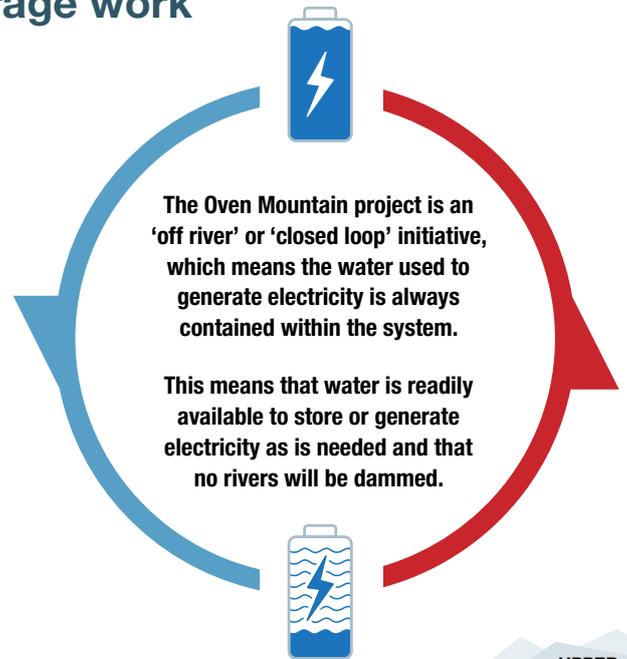
When the system is in 'Generating Mode', gravity fed water flows from the Upper Reservoir, through reversible hydroelectric turbines located in an underground power station, generating electricity that is fed into the national electricity network.

The water is then collected in the Lower Reservoir. It does not flow back into the Macleay River.

## PUMPING MODE

When the system is in 'Pumping Mode', the water is released from the Lower Reservoir back into the tailrace tunnel and is pumped back to the Upper Reservoir to recharge the system.

The water is then collected in the Upper Reservoir to be released when the system switches back to 'Generating Mode'.



Energy generated is fed into the national electricity network.



Once construction is complete, the initial fill of the Lower Reservoir will take place under strict environmental conditions when the river is high.

LOWER RESERVOIR

Water is released from the Upper Reservoir, falling over 600 metres through the high-pressure headrace tunnel to the underground power station, and then through the tailrace to the Lower Reservoir.

UNDERGROUND POWER STATION

TAILRACE

HEADRACE

UPPER RESERVOIR



The Oven Mountain Pumped Hydro Storage project is designed to produce up to 900 megawatts over a 12-hour period.

To find out more about the **Oven Mountain Pumped Hydro Energy Storage** project, or to sign up for our mailing list visit: [www.ompshydro.com](http://www.ompshydro.com)

You can also contact the team at: [info@ompshydro.com](mailto:info@ompshydro.com) or on 1800 518 194



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