



## FACT SHEET

# Pumped Hydro and the Energy Transition

EnergyAustralia acknowledges that the proposed site for the Lake Lyell Pumped Hydro Project is on the traditional lands of the Wiradjuri Peoples. We recognise their continued connection to Country and culture, and we pay our respects to Elders past, present and emerging.

## About the Lake Lyell Pumped Hydro Project

EnergyAustralia is investigating the feasibility of a pumped hydro energy storage project on land it owns near Lithgow in New South Wales. The project would use water from Lake Lyell, originally built to support surrounding power stations and existing transmission infrastructure. It would also involve construction of a new purpose-built upper reservoir on nearby Mount Walker to operate a utility-scale energy storage facility. The project would be capable of producing up to 335 megawatts (MW) of reliable energy – enough energy to supply over 150,000 households for up to eight hours<sup>1</sup>.



Proposed capacity

**335MW**



Energy for homes

**150,000**

## What is energy storage and why is it needed?

- As Australia accelerates its clean energy transformation, energy generation from renewable sources, like solar and wind, is expected to triple in the coming decades.
- Energy storage is vital to support renewable energy sources such as solar or wind power. It allows the capture of energy when renewable supply is plentiful, storing it for later use when needed. For example, storing solar energy during the day for use at night or at times of high demand such as heatwaves or in winter.
- Large batteries and pumped hydro can be used for energy storage. The Lake Lyell Pumped Hydro Project is expected to operate for around 80 years, generating around 335 megawatts of electricity for eight hours at a time. It will help provide reliable and affordable energy for the Central West region and the state.

<sup>1</sup> Based on POE10 demand of 1.97kW for EnergyAustralia's portfolio of NSW residential customers at 335MW of generation.

## What is pumped hydro?

Pumped hydro is a proven and reliable form of energy storage. It works by using two reservoirs of water – one up high and one down low – to store energy and generate electricity. When excess power is available from solar or wind generation, the plant uses this energy to pump water from the lower reservoir to the upper reservoir.

When energy is needed, the process is reversed and water from the upper reservoir is released back into the lower reservoir through a system of pipes. As the water flows back downhill, it turns turbines which generate electricity. This is sent to the grid for use in homes and businesses.

On Australia's east coast, the Shoalhaven and Wivenhoe pumped hydro schemes have operated for decades. Other pumped hydro projects being built are Snowy 2.0 and the Kidston project in Queensland.

## Why is EnergyAustralia interested in pumped hydro?

EnergyAustralia is one of Australia's leading generators and retailers of energy. We provide energy to over 1.6 million customers and employ around 2,300 people, including our team at the Mount Piper Power Station near Lithgow.

Our purpose is to lead and accelerate the clean energy transformation for all. The Lake Lyell Pumped Hydro Project is part of a portfolio of flexible capacity projects being developed to deliver a reliable energy system for the future and reach our goal to achieve net zero emissions by 2050.

Other projects supported or being developed by EnergyAustralia include battery projects at Riverina and Darlington Point in partnership with Edify Energy, the Wooreen battery at Jeeralang in Victoria, and the Mount Piper battery in the Central West of New South Wales. EnergyAustralia will also commission the 316MW direct emissions offset gas and hydrogen-capable Tallawarra B Power Station and is underpinning the Kidston pumped hydro storage project in Queensland.

## We're here to help

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Supported by



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