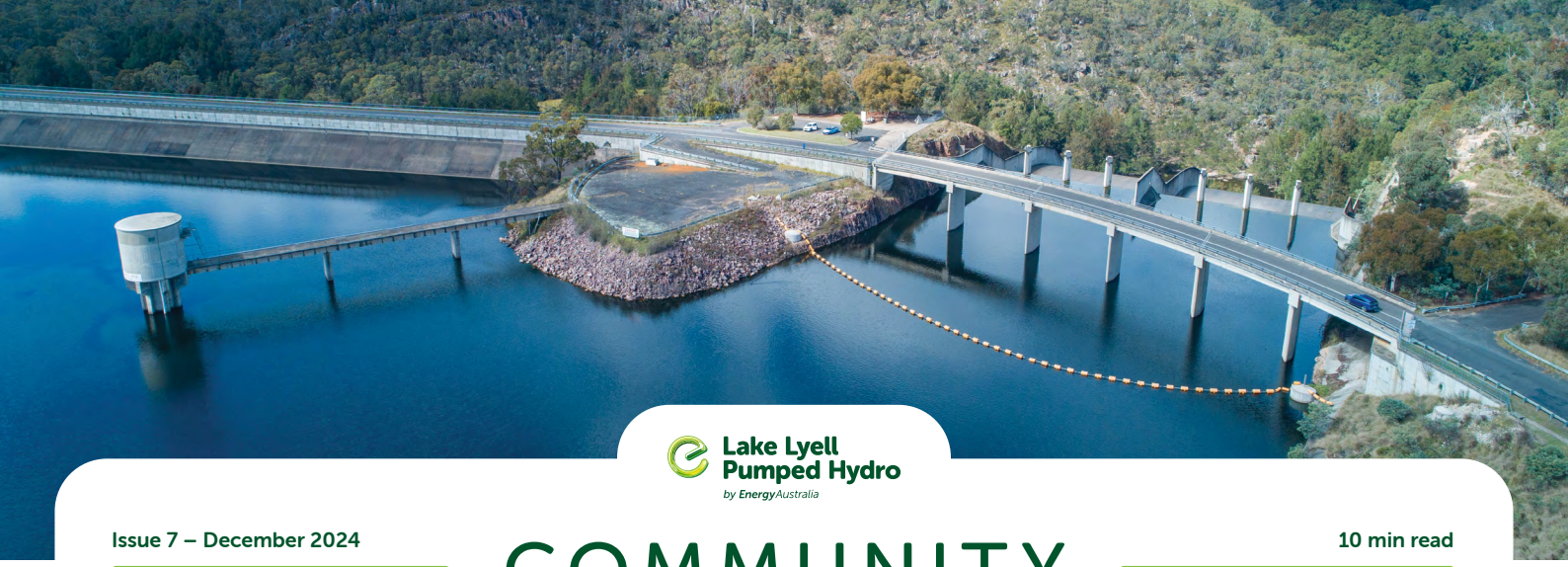

Lake Lyell Pumped Hydro
by EnergyAustralia

Issue 7 – December 2024

10 min read

COMMUNITY NEWSLETTER

Lake Lyell Pumped Hydro Project

Welcome to our December 2024 Community Newsletter.

In this edition, we share information on our recent key project milestones and address some misconceptions raised through our recent community consultation.

Proposed capacity	Energy for homes	Storage duration	Operational life
350MW	~150,000*	~8 hours	~80 years

Lake Lyell Pumped Hydro Energy Storage System (PHESS) declared a Critical State Significant Infrastructure Project

The Lake Lyell Pumped Hydro Project was declared a Critical State Significant Infrastructure (CSSI) by the New South Wales (NSW) government earlier this year. This means that the government considers the project essential for the State for economic, environmental or social reasons. The approval process for CSSI projects is rigorous, designed to ensure that they meet strict requirements. It also means there are no third-party appeal rights in relation to CSSI declarations and decisions.

In practice, there will be no change to how we work to deliver the project, including community engagement and community benefit sharing, nor the amount of information made publicly available during the exhibition of the project's Environmental Impact Statement (EIS). The EIS will be on exhibition for public comment next year.

A summary of the CSSI process is available on the Department of Planning, Housing, and Infrastructure's website

* Based on POE10 demand of 1.97kW for EnergyAustralia's portfolio of NSW residential customers at 335MW of generation.

Getting the facts

Throughout our community engagement on the Lake Lyell Pumped Hydro Project, members of the community have made comments based on their own research or what they have heard chatting with neighbours, people at work, and/or their friends. The project team has collected all this feedback and is pleased to provide a response to some of the comments in this 'Getting the facts' section of the newsletter.

Comment: "This is the right project in the wrong location" 1

Fact:

This location is widely regarded as one of the best locations for pumped hydro storage in NSW, supported by Lithgow City Council's **Lithgow Emerging Economies Plan**[1].

Lake Lyell already provides a lower reservoir, a water source, access to transmission infrastructure, good topography, and land already zoned for energy generation.

Comment: "Isn't there an academic study which doesn't include Mt Walker as a good pumped hydro site?" 2

Fact:

The Australian National University has produced its **Bluefield PHES Atlas**[2] which does not identify Mt Walker as the location for an upper reservoir. The report still uses Lake Lyell as the lower reservoir but identifies a site north of Rydal for the upper reservoir. The report's disclaimer notes that none of the sites "have been the subject of geological, hydrological, environmental, heritage and other studies, and it is not known whether any particular site would be suitable".

Comment: "The change in the water level will make the Lake unavailable for recreation" 3

Fact:

Historically, the water level in Lake Lyell has moved up and down with the seasons. Lake users may remember that the lake has not always been consistently full of water. Prior to 2010 it fluctuated greatly. During the 2006 drought, the level fell 20m below full. Pumped hydro operation will see the water level drop very gradually over a 8-hour period by around two meters.

EnergyAustralia has already committed to making further investment in the Recreation Centre, including new pontoons, new swimming areas, and ensuring the boat ramp is long enough to support launches when lake levels are lower.

Comment: "Why don't you just build more grid-scale batteries?" 4

Fact:

Different technologies play different roles in the broader energy market. Batteries operate over shorter periods of time. Pumped hydro operates over longer periods and are often referred to as long duration storage.

Batteries also have a life span of between 15 to 20 years, while pumped hydro has a lifespan of 80 to 100 years. This provides greater supply and stability in the system as pumped hydro can provide coverage during battery maintenance and vice versa.

Comment:
"It uses more energy than it generates"

5

Fact:

No energy storage system (including the lithium-ion batteries) are 100% efficient. The Lake Lyell Pumped Hydro Project will have a round trip efficiency of around 80% which is as good as lithium-ion batteries, and better than some other emerging storage technologies.

Comment:
"1,344 Aboriginal artefacts have been stolen from Mt Walker"

6

Fact:

Archaeological excavations were undertaken on the project site in accordance with the **Heritage NSW Code of Practice**[3], and some 1,344 stone artefacts were recovered for analysis. The artefacts remain temporarily in Sydney and will be returned following finalisation of the Aboriginal Cultural Heritage Assessment. The exact method and location for return of the artefacts is still being discussed with the 22 registered Aboriginal parties in line with the Heritage NSW Code of Practice.

A history of Lake Lyell

Lake Lyell is not a naturally formed lake. The dam was built in 1982 by the then NSW Government owned Delta Electricity to supply water for the Mount Piper and Wallerawang power stations. The construction of the dam flooded sections of the Coxs River and Farmers Creek, creating Lake Lyell. It operates as part of a connected system of dams, including the Thompsons Creek Reservoir and Lake Wallace.

Between 1994 and 2001, upgrades were made to the dam to increase the capacity and make improvements to the spillway. During this period, the lake level was raised by 3 metres as part of the upgrade works.

As owner and operator, EnergyAustralia is responsible for maintaining Lake Lyell, Thompsons Creek Reservoir, and the Lilyvale Dam, including making significant investments into the dam's ongoing compliance, capital works, and operational costs.

Lake Lyell Spillway Widening c. 1994

EnergyAustralia spends over $2.5 million annually to maintain this asset. The delivery of the Lake Lyell Pumped Hydro Project provides a revenue stream for dam maintenance for the next 80 years, and ensures that the lake remains available for recreation and community use.

[1] Lithgow Emerging Economies Plan available to read here https://www.leep.lithgow.com/transition-plan/

[2] Bluefield PHES Atlas available to read here https://re100.eng.anu.edu.au/bluefieldatlas/s

[3] Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW available to read here https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Aboriginal-cultural-heritage/guide-to-investigating-assessing-reporting-aboriginal-cultural-heritage-nsw-110263.pdf

Our Project HQ in Lithgow's Main Street

Visit us at Project HQ

Drop by our Project HQ located at 124 Main Street, Lithgow. We're open most days throughout the week. Drop us an email at **community@energyaustralia.com.au** so we can have the kettle on when you drop in.

We're here to help

If you have a question please don't hesitate to contact us. You can also keep updated by following us on Facebook at Lake Lyell Pumped Hydro Project.

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