

# Energy Reserve 1 Project

## Frequently Asked Questions



Lochard Energy understands that neighbours and the community may have questions and concerns regarding the proposed Energy Reserve 1 (ER1) project.

To assist with addressing these concerns, Lochard Energy has compiled a list of frequently asked questions and answers. If your question or concern is not addressed, please contact Lochard Energy at [er1@lochardenergy.com.au](mailto:er1@lochardenergy.com.au)

### What is Energy Reserve 1?

Lochard Energy is proposing to develop a fast-start dispatchable energy generation power station, near Benalla in north-east Victoria, called Energy Reserve 1. The power station is being designed to accommodate two technology types:

1. 200MW of highly efficient fast-start natural gas reciprocating engines to deliver power to the electricity network during periods of low renewable energy generation; and
2. A 200MW large-scale battery to absorb excess power from the network (for instance when the system cannot accommodate the amount of renewable energy being produced), and quickly dispatch (within milliseconds) to support the network and electricity market stability.

This type of power station is commonly referred to as a "peaking power station", as it is likely to operate for only a few hours per day on average.

### Why is this project needed?

As Victoria moves to renewable energy, there is a need to ensure a reliable and stable supply of energy to consumers and businesses. To address this, dispatchable power generation, with the ability for almost instantaneous delivery of energy, is needed to work together with intermittent renewable energy sources. This is particularly important as we plan for the closure of coal-fired power generation, such as the Yallourn power station (2025-2029).

ER1 will provide "back-up" generation in the event of regional grid power outages and incremental "peaking" power, during times of very high energy demand while we transition to renewable energy.

### What is the current status of the development process?

Concept designs for ER1 are now complete, based on

initial environmental site assessment and public consultation. We are currently reengaging key stakeholders as well as continuing neighbour engagement, in preparation for public exhibition, which is likely to occur in Q3, 2022.

### Why not just use batteries?

Batteries (and other energy storage technologies like pumped-hydro) are required to absorb excess energy and very quickly dispatch during system shortfalls. However, batteries are only viable for a short period of time (e.g. 2 to 4 hours), and they are not always charged when you might need them (as they rely on absorbing excess power from the network). This can be a significant issue when our energy system experiences longer-term impacts (e.g. transmission line failures, extended heat waves and/or periods of sustained renewable energy shortages). If support is required, ER1 can generate electricity efficiently for a number of days with its efficient gas-fired generators.

### How will this effect our greenhouse gas emissions and efforts to reduce climate change?

While ER1's proposed gas-fired generators will produce greenhouse gas emissions when operating, their emissions intensity (per unit of electrical energy produced) will be significantly lower to that of Australia's coal-fired generators.

As a more efficient, responsive form of generation, ER1 is likely to 'displace' these coal fired generators at times when demand for energy is high, reducing overall emissions.

ER1 will also help to support the utilisation of more renewable energy into the grid and increase the pace that fossil fuels are phased out – speeding up our transition to net zero and further reducing overall emissions.

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### What will ER1 look like?

ER1 is being designed to complement the surrounding landscape as a means of reducing visual impact to nearby neighbours. Visually, ER1 will be low profile and modular in form, with the gas generation engines housed within a large shed. The tallest structure will be the flue stack, at approximately 25 metres tall. For reference, these stacks will be lower than the existing powerlines which run parallel to the power station.

### Where will ER1 be located?

The facility will be located off Lee Road, Winton near the Hume Highway, approximately 12 kilometres north-east of Benalla.

### When is construction expected to start and how long will it take?

Construction is not expected to start before 2024 and is scheduled to take 12 to 18 months.

### How frequently will it operate?

ER1 is designed as a dispatchable or "peaking" power generation facility, so it will only operate periodically when it is needed to support the stability of Victoria's energy generation. It might not operate for days or weeks, and then, if required, it might operate for several hours each day the following week.

### What is the expected lifespan of ER1?

ER1 is expected to operate for 25 years, ensuring decommissioning by 2050 and in line with Australia's goal of net zero by 2050.

### Will there be land clearing? What are the impacts on native species?

We are committed to supporting sustainable practices and have adopted an 'avoid and minimise' approach to manage adverse impacts to native vegetation and habitat values. This will ensure the removal of native vegetation is restricted to only what is reasonably necessary, and that biodiversity is appropriately compensated for any removal of native vegetation that is approved. It is envisaged approximately 0.5 ha of native vegetation will be affected, including three large trees. However, there is no impact to any species in line with the Flora and Fauna Guarantee Act and Environment Protection and Biodiversity Conservation Act.

### What are likely emissions (air, noise and water)?

**Air Quality** - Modeling indicates potential pollutants produced by ER1 will not exceed strict legislated air quality standards and will not contribute significantly to air pollution emissions already present in the region (i.e. emissions from transport on the Hume Highway). Regardless, additional design features will be incorporated into ER1 to further reduce emissions.

**Noise** - Potential sources of noise will be mitigated through the use of high performance design features, such as stack silencers, low noise fans and prefabricated masonry panels to ensure impacts to neighbours are minimised and do not exceed the EPA 1826 - Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues (EPA 1826).

**Water** - ER1 does not interact with any designated watercourses or floodplains nonetheless, Lochard Energy has developed a water and drainage strategy to ensure impacts associated with run-off are minimised.

There will be some water use, limited to the site offices. Cooling for the engines will be closed loop, as such there is no need for daily water consumption from town or bore water source.

### Will there be local employment opportunities?

Accurate predictions of how many jobs may be required to construct ER1 are not yet known. For a project of this size, we estimate between 100 to 150 direct temporary jobs will be created during the peak construction period. Once operational, the facility will likely employ 5 to 10 people, with additional local services such as cleaning and maintenance utilised from time to time.

### Does Lochard Energy have any experience in developing these types of facilities?

Lochard Energy has extensive experience in the design, construction, operations and maintenance of energy infrastructure. We apply a rigorous approach to quality and safety and have maintained an excellent safety record, something we are very proud of and work hard to maintain.