REEVES PLAINS ENERGY HUB BATTERY PROJECT

FAQs guide

Battery Generation Capacity

500 MW total, delivered in two stages:

- **Stage 1:** 250 MW (4-hour storage)
- **Stage 2:** Additional 250 MW (4-hour storage)

Expected Lifespan

20 years for the battery system (Stage 1)

Reeves Plains Energy Hub

Backed by alintaenergy

ABOUT THE PROJECT

This guide focuses on the energy hub's battery

Alinta Energy is developing an energy hub at Reeves Plains, located north of Adelaide. The Reeves Plains Energy Hub is a significant development aimed at enhancing South Australia's energy security and grid stability.

It has two elements: a battery and a gas-fired power station. The battery – also known as a Battery Energy Storage System – will be delivered in two stages. Each stage could power the equivalent of around 300,000 South Australian households for up to four hours.

The battery aims to boost South Australia's electricity storage capacity and will help ensure a reliable and consistent supply for the region.

How will the battery work?

A battery stores electricity so it can be used later. When there's more energy being produced than people need – like on a sunny or windy day – the battery charges up by storing that extra power. Then, when demand goes up or renewable sources aren't producing (like at night or during calm weather), the battery sends that stored energy back into the grid, which helps to keep the lights on and the grid running smoothly.

Why is battery storage critical in South Australia?

South Australia is leading the way in renewable energy, with more than 70% of its electricity now coming from wind and solar. But because these sources depend on the weather, they don't always produce power when it's needed most.

That's where battery storage comes in.

The battery will store excess energy when the sun is shining or the wind is blowing — and release it back into the grid when demand is high or supply is low. This helps keep the power system stable, reliable, and more affordable for everyone.

As coal-fired power stations retire and more renewables come online, batteries like the one at Reeves Plains will play a vital role in keeping the lights on and supporting South Australia's energy transition.

BENEFITS

The Reeves Plains Energy Hub is designed to deliver long-term benefits for both South Australia's energy system and the local community. This includes:

Local jobs and skills development

Construction of the hub will create jobs and opportunities for businesses to get involved. We are committed to maximising local content on the project by using local service providers and allocating roles for apprentices and learner workers during construction and operations.

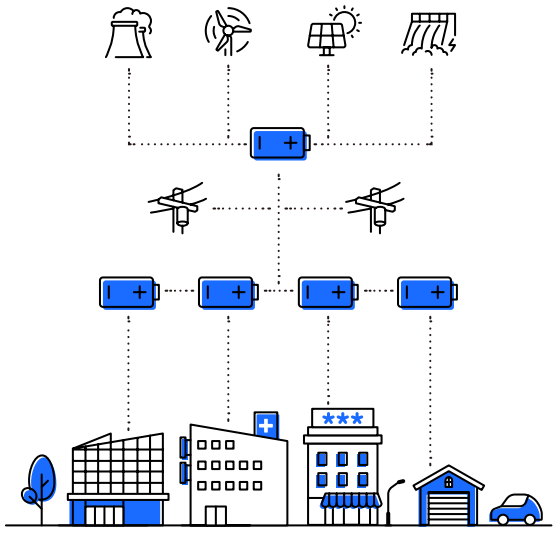
Supporting CFS emergency response

We are working with the Country Fire Service (CFS) to develop a detailed Emergency Response Plan. The battery site is also required to have water tanks which we have located at the site entrance to allow the CFS easy access and use in the event of any nearby fires in the surrounding landscape.

Benefit sharing

Each project at the Energy Hub will have its own benefit sharing fund and program to contribute towards local initiatives such as:

- Education (scholarship programs, skills development and training programs)
- Energy initiatives (community-based energy projects)
- Economic participation (opportunities to supply the project and build business capabilities for the future)
- Social investment and sponsorships
- A Neighbour Program will be implemented to provide benefits specifically for neighbours close to the project



How the battery storage would work within the grid.

PROJECT SPECIFICS

Reeves Plains Battery Overview

Objective: Stabilise the power grid by storing excess energy for high-demand periods.

- **Capacity:** Each 250 MW battery can power around 300,000 households for up to four hours.
- **Development stages:**
  - **Stage 1:** 250 MW battery with four hours of storage.
  - **Stage 2:** Additional 250 MW battery with a further 4 hours of storage capacity, totalling 500 MW of capacity.

Project elements

Each stage will include approximately 194 battery modules and 89 inverters, electrical connections, substation, water storage, office and control room, vegetated site screening, as well as fencing and lighting.

How will it connect to the grid?

It will connect to the grid via an underground transmission connection to a substation at the site. We're partnering with Electranet to have the substation built onsite. The substation will connect to an existing 275kV transmission line that runs through the site.

WHAT TO EXPECT DURING CONSTRUCTION

How long will it take to build the battery?

It's expected to take approximately 2 years to build the first stage of the battery.

What can be expected during construction?

We are committed to reducing construction impacts on communities and the environment and keeping people safe whilst we work. Some of the ways we do this, while we work closely with our contractors, include:

- Only working during standard construction hours where possible
- Actively monitoring and managing construction activities
- Adhering to planning conditions, legislation, industry standards, and guidelines
- Maintaining regular communication with the local community
- Prioritising a safe worksite and construction procedures

Independent technical studies have been undertaken to understand any potential environmental and social impacts during construction. Studies have included biodiversity, cultural heritage, noise, traffic, landscape and visual, and Bushfire and/or Hazard of a Bushfire. The studies have informed the development of management plans that address any impacts during construction and how we expect them to be managed.

Traffic

Our traffic impact assessments and traffic management plans are tailored specifically to manage increased traffic around the project site during construction. A traffic management plan is being prepared in consultation with the relevant road authorities to ensure that any impacts to local traffic are minimised. A specific haulage route has been designed for oversized vehicles to avoid driving through the centre of towns such as Mallala, residential areas, schools, and unsealed roads. Any changes in road conditions surrounding the site will be communicated ahead of time.

Noise

Construction noise targets are guided by the relevant legislation in South Australia, in accordance with Australian Standard 2436–1981 "Guide to Noise Control on Construction, Maintenance, and Demolition Sites". Strict noise mitigation measures will be put in place to limit the impact on residents as much as possible. This will include working with the contractor to schedule works so that noisier activities occur at times when they will have the least impact.

The work hours of the project are as follows:

- Monday to Friday: 7am – 5:30pm
- Saturday: 7am – 1pm
- Night works (if required): 7pm – 6am
- Public holidays: Observed

Night works are not planned to be performed unless required under a condition of the traffic management plan approval by the road authority.

Dust

The project will actively manage dust during construction through using management measures such as water carts, minimising soil piles on site, and avoiding the use of oversized vehicles on unsealed roads.

Social and economic

During construction, you may find more people and vehicles around the nearest town and on the roads. This additional temporary workforce will assist in providing local towns an economic boost through spending on food and local goods and services.

WHAT TO EXPECT DURING OPERATION

Once the Battery Energy Storage System (BESS) is commissioned the facilities will be operated by a small site team who will undertake regular maintenance and inspections during normal working hours. The site can also be monitored remotely.

What is the lifetime of the battery?

The expected lifetime of the battery is 20 years.

What type of batteries are being used?

The Reeves Plains BESS is made from Lithium Iron Phosphate (LFP) batteries. Most batteries now being developed are LFP batteries. This is because LFP batteries are safer – they have higher heat resistance, and better life cycles than older technology batteries like Nickel Magnesium Cobalt batteries.

What will the batteries look like?

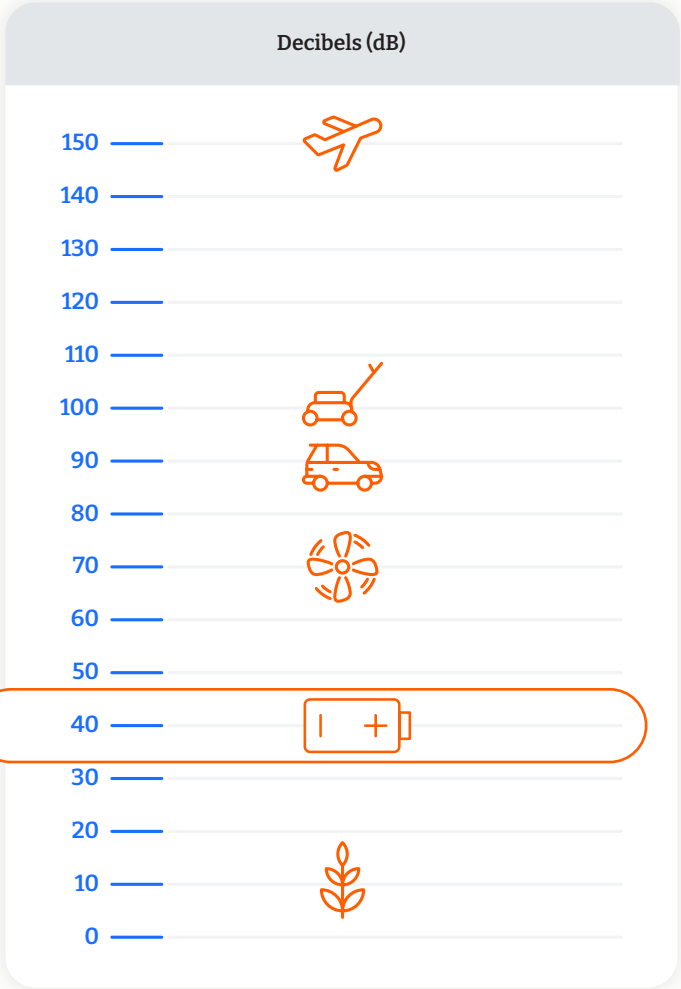
The batteries are kept in large shipping containers. The containers are designed to minimise visual impacts through using matte non-reflective finishes and being setback from roads. To minimise impacts of lighting during the evenings the site will only use movement and heat sensor lighting.

Additionally, we will plant native vegetation to screen the site. This will include trees, shrubs, and groundcover endemic to the Adelaide Plains. We will plant this vegetation following the construction Stage One to avoid any potential impacts to the vegetation during construction.

Will the BESS be noisy?

The BESS facilities aren't particularly noisy, with the main noise source being the inverters, transformers and their cooling fans which make a 'hum' sound when operating. The batteries won't be operating 24/7, just responding to demand spikes, when they are charging up or dispatching energy they will be making a hum sound that's similar to the sound of air conditioning units.

We conducted noise modelling on a range of scenarios and confirmed the BESS is designed to operate within regulatory noise limits to minimise impact on sensitive receivers.



INCIDENT MANAGEMAENT

Safety is our top priority. A detailed Fire Risk Assessment has been completed to ensure the facility operates safely and responsibly.

How safe is the battery for the community?

The chance of a serious incident is extremely low. Even in the unlikely event of a fire, the site is designed to contain it and prevent it from spreading.

What are the risks and how are they managed?

Due to the flat, open cropping landscape, the greater fire risk is more likely to come from offsite, such as a grassfire. To reduce risk, the site includes a 50m buffer area around the facility – this helps to achieve a low bushfire attack level rating. This buffer area will consist of two parts: an inner zone with no flammable material and an outer zone where flammable materials are kept to a minimum to reduce any potential risks.

In addition, the battery site will have water tanks (with up to 300,000 litres in capacity) located near its entrance. These have been located to allow for Country Fire Service access and use in the in the event of any nearby fires from the surrounding landscape.

What about a response if something does happen?

The goal is to prevent incidents and ensure a quick, effective response including:

- Firefighters could access the site quickly via both Redbanks Road and Day Road, so any response can be fast and effective, even in an event of a nearby grassfire from the surrounding landscape.
- Emergency plans would be in place to protect nearby residents. We'll work through the process to develop a detailed emergency response plan in consultation with the Country Fire Service and relevant authorities.

What fire safety measures would be in place?

Fire safety is a top priority, and the project will include a range of advanced systems and plans to keep people safe. While the chance of a fire starting from the battery is extremely low, we must be well prepared just in case. The BESS site has a multi-tiered system with cascading controls to minimise the risk of a fire.

INCIDENT MANAGEMENT

Cascading fire safety management controls of the battery

Each battery container will have its own built-in fire prevention and suppression system, including heat and smoke detectors that automatically shut down the system and activate extinguishers if needed. The batteries are spaced apart in separate containers to prevent fire from spreading, and the design follows strict safety standards.

Across the site, we maintain clear separation between equipment, establish firebreaks, and follow strict safety procedures for any high-risk work like welding.

Battery Management System

Each battery module contains a Battery Management System (BMS). The BMS prevents damage to the battery cells from overcharging or over-discharging by shutting down battery modules if monitored conditions are outside of those considered safe for operation.

Any issues are usually prevented at this stage and it's very rare for something to occur beyond this point.

Gas Detection

If the BMS fails, the battery may become unstable, leading to increased temperature and pressure and the release of carbon monoxide. To counter this, a gas detection system will:

- Cut power to the affected battery cell
- Activate ventilation within the BESS module
- Trigger alarms for immediate response
- Warn operators early to prevent escalation

This ensures safety and prevents further damage.

Fires Suppression System

If the gas detection system fails and smoke is detected in the BESS module, the fire suppression system will automatically release an aerosol solution to extinguish the fire

Emergency Response Plan

If a fire is detected at the BESS site, the site will follow an Emergency Management Plan, which is designed in consultation with local emergency services including the Country Fire Service. The Local firefighters will attend the site using the onsite fire management measures including water tanks, access tracks for direct access to the BESS modules and Emergency Information Container.

Key contacts

How do you keep people informed?

We use a range of tools to keep people up to date. These include:

- a dedicated project webpage
- meetings, phone calls, emails and/or letters to anyone directly affected
- newsletters
- text notifications
- fact sheets
- updates during construction
- meetings with relevant agencies and groups

How can I reach out to the project team?

For more information or to get in touch with the project team, you can contact us at **0497 928 036** or via email at **reevesplains@alintaenergy.com.au**

Reeves Plains Energy Hub

Backed by alintaenergy