



Fact sheet

# Battery Energy Storage System (BESS)

## Calala BESS Project Overview FAQ

### What is a Battery Energy Storage System?

A BESS (or big batteries) uses energy storage technology to capture energy from different sources (grid, solar, and wind) to store for later use. It provides reliable, clean, and affordable electricity, giving more flexibility to the power system operators and utilities to quickly discharge energy to consumers during peak demands, power outages and shortages. These systems can also bolster electricity supply to the grid when there is not enough sun or wind to generate energy.

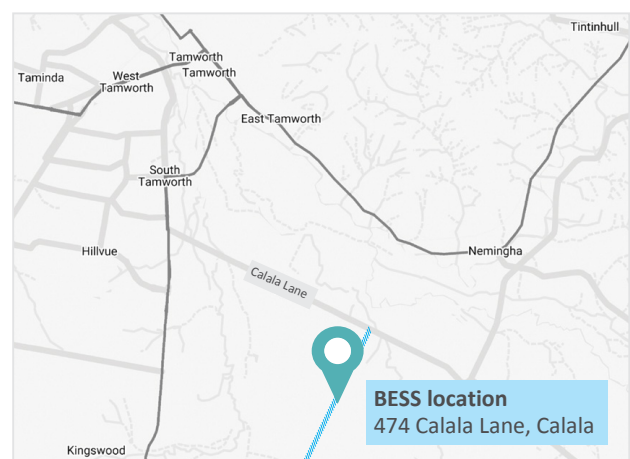
### How does BESS work and is it safe?

A BESS works like a standard battery used to power electronic devices. It requires several extra components to connect to an electrical network and meet Health, Safety and Environmental (HSE) standards set out by the Australian Government and Environment Protection Authorities, to ensure the BESS is safe and reliable.

### Where will the BESS be located, and what is its capacity?

Our proposed BESS will be located at 474 Calala Lane, Calala, New South Wales, about 5.8km southeast of the Tamworth CBD. It will have a capacity of up to 300MW, generating 1,200MWh to supply 4 hours of electricity to power 80,000 homes. Many batteries will be installed together to act as a large-scale power generator and connect to the New South Wales (NSW) electricity transmission grid.

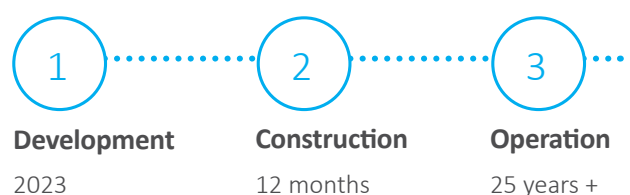
### Project location



### When will construction start, and how long will the BESS last?

Construction of our Calala BESS will begin in 2023 and can take up to 12 months to complete. The BESS can last for up to 25 years. After this period, it will be decommissioned, and the batteries recycled and repurposed.

### Project timeline



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### What is the land currently used for, and why was this site selected for the Calala BESS?

Our Calala BESS will be built on land currently used for agriculture, and cover a footprint area of 7 hectares. We selected this site following extensive studies conducted across several locations. The site meets all technical, community, cultural heritage, and environmental requirements. The site was selected due to its proximity (being about 1.2km) to electricity transmission infrastructure. Our Calala BESS will connect to a 330kv transmission line that feeds into the Tamworth Substation to supply power into NSW's electricity grid.

### How will environmental, social, and health and safety impacts be managed?

Our project site must meet stringent Australian Government standards and frameworks to minimise impacts. We also engage independent specialists to conduct detailed assessments on all our project sites and implement measures to mitigate and minimise impacts. They assess environment and biodiversity, cultural heritage, noise, traffic, landscape, visual impacts, and fire and bushfire hazards. Detailed fact sheets about how we will manage these impacts and hazards will be shared via our website and engagement hub.

### What benefits will this BESS offer?

BESS can deliver affordable, clean, and reliable electricity to the Australian communities where we operate by allowing more solar and wind energy into the grid to help reduce volatility and lower electricity prices. Our Calala BESS can help meet NSW's future electricity needs while providing economic, social, and environmental benefits, including:

- Powering up to 80,000 homes a year
- Generating up to 4 hours of electricity a day
- Creating 150 jobs during construction and 10 jobs during operation
- Funding for local community benefit programs
- Reducing up to 1,140 tonnes of carbon emissions.



Reduce CO<sup>2</sup>  
emissions  
**1,140t**



Power  
**80,000**  
homes



Create up to  
**160 JOBS**



Generate  
**1,200MWh**  
electricity

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# Battery Energy Storage System (BESS)

## Creating Economic Opportunities and Community Benefits FAQ

### What economic opportunities will your renewable energy projects offer?

We are committed to creating and maximising local opportunities where possible for communities where we operate. Our projects will deliver economic and social benefits, we can do this by:

- Creating jobs during and post construction by employing locally
- Offering training and education opportunities
- Buying locally to boost regional economies
- Building relationships and working with local contractors, suppliers and service providers
- Delivering benefit sharing to fund local projects determined by the community
- Generating a source of income for landowners.

### What kind of jobs will be created?

We seek a range of expertise, skills, and services to construct and operate our projects, and the types of jobs may include:

- General labourers
- Installers and high voltage operators
- Site managers
- Electricians
- Engineers
- Concrete suppliers
- Landscapers
- Accommodation providers
- Service providers.

### How will you procure a business or service for these jobs?

We will procure from Tier 1 suppliers, and work with Tier 1 contractors for installation, in accordance with Government legislation and Equis' commitment to safety and standards. Our Procurement and Supplier Guidelines will be available online before the project's start date.

### How do I get involved in your project?

We seek expressions of interest from local job seekers, businesses and service providers to work on our projects. Businesses, suppliers, services providers can register their interest by submitting a form on our [engagement hub](#).

Our delivery partners or contractors (and their sub-contractors) will engage and employ workers for our projects. We will provide them with registrations of interest when appointed.

### How will your projects create social opportunities for our community?

At Equis, we are committed to delivering long-term investment in the regions and the communities where we host our renewable energy projects.

Engaging with your community is essential to us to ensure that our renewable energy projects offer mutually beneficial and lasting economic and social outcomes. Our strategies aim to stimulate and grow enterprise while building social capital and community capacity.



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We will engage with local councils, schools, and community groups to develop community benefit-sharing programs that foster positive outcomes, provide value, and contribute to more equitable regional economies.

### How will you determine the benefit amount to be paid to our community?

We calculate the benefit amount paid to a community based on the project's size and the community's needs. We will engage with community stakeholders to determine this. We may also pay a total amount calculated on the projects installed megawatts. This amount will be paid yearly throughout the life of the project.

### How will funding beneficiaries and what our community needs be determined?

As part of our planning process, we profile and research every community where we deliver our projects. We engage with the community stakeholders to identify areas of demonstrated need to develop targeted community benefit-sharing strategies. This helps inform decisions, determine funding needs, and deliver targeted and meaningful benefits for the community. For example, we may fund training to up-skill youth or support a local sporting club.

### How will funding be spent?

We want the funding to have a positive, lasting, and meaningful long-term impact on the local community. We will work with the community, who will guide us on the decisions about how the funding is spent. The community will advise us on their needs and priorities to recommend ideas for benefit-sharing initiatives.

### Will our community get to have a say in the approach to benefit sharing?

We will establish a pool of funding for benefit initiatives identified by the community.

Our community engagement process is ongoing, and the input we receive from communities will inform, shape, and evolve our benefit-sharing funding to respond to their needs.

### How does our community participate in your benefit-sharing program?

We want the community benefit-sharing fund to benefit a broad range of people in the community, and we welcome everyone's input and feedback. Community groups, councils and not-for-profit organisations are encouraged to participate to partner with us by registering on our [engagement hub](http://equis.engagementhub.com.au).

### Who will benefit from your projects?

Benefit-sharing initiatives, as determined by the communities where we deliver our projects, will benefit local residents, community groups, and organisations. These benefits may also have a flow-on effect on the broader community and region.

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# Battery Energy Storage System (BESS)

## Managing Environmental Impacts FAQ

### How can BESS benefit the environment?

BESS can benefit the environment by storing excess energy from renewable energy sources, such as wind and solar that may otherwise be lost. Stored energy can quickly be discharged when there is an imbalance in the electricity supply, which reduces the need for energy from legacy generators and help reduce carbon emissions.

### How will BESS be managed at the end of life?

A BESS expires after 25 years. Their materials can be recycled into new batteries or repurposed for other uses. The battery industry is expected to contribute up to \$7.4 billion annually to Australia's economy and create 34,700 jobs by 2030. We will work with industry experts to recycle and repurpose our big batteries at the end of their life. Recycling and repurposing our BESS will enable us to support a circular economy and Australia's role in the battery value chain.

### How will environmental impacts be managed?

We are committed to ensuring our BESS have a minimal impact on the environment and biodiversity. As part of our planning process, we will take measures to mitigate environmental, social, and cultural heritage impacts.

We will meet best practice guidelines set out by State and Commonwealth Government and collaborate with them to mitigate any biodiversity offsets required under the Environmental Protection and Biodiversity Conservation Act 1999, such as removing minor native vegetation or relocating wildlife.

Specialists will complete detailed feasibility and biodiversity assessments of the project site to ensure

that environmental impacts are avoided or minimised. Their assessments will include:

- Environment and biodiversity
- Cultural heritage
- Noise
- Traffic
- Landscape and visual
- Hydrology
- Bushfire and other fire hazards.

### Will BESS impact waterways?

We have engaged independent experts who found it unlikely that any drainage or hydrological impacts will occur from our proposed BESS facility. We will also implement a Drainage Management Plan for our BESS project to identify and mitigate potential impacts to floodplains and waterways, and protect life, property, infrastructure, and environmental health.


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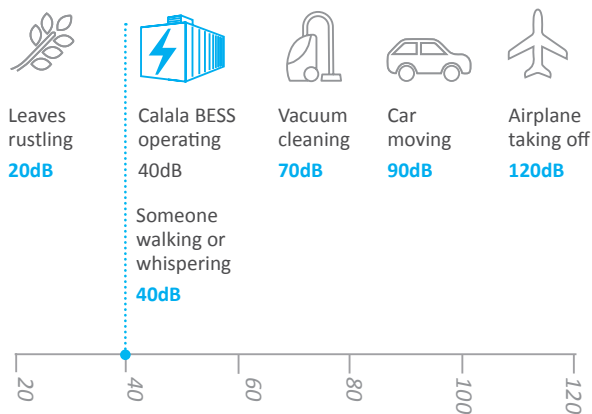
# Battery Energy Storage System (BESS)

## Managing Noise, Visual, and Traffic Impacts FAQ

### Will the BESS generate any noise?

A BESS will make some noise when it charges and discharges. From a distance of 550 meters, our Calala BESS will typically emit a noise level of about 40 decibels, similar to the noise level of someone walking or whispering. The main noise comes from the BESS' cooling fans, which help regulate the operating temperature and sounds like an air conditioning unit.

#### Noise levels for different elements



### How will noise be managed?

We have engaged independent technical experts to conduct extensive noise modelling and assess potential impacts to the nearest residential areas during construction and operation. This will ensure we meet the required noise standards. While the modelled noise for the Calala BESS is generally below the required thresholds for a residential area, we are committed to meeting the relevant

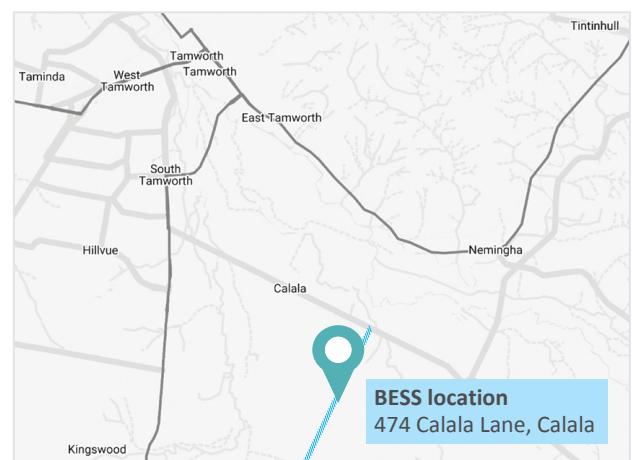
Environmental Protection Authority's noise standard. We will employ mitigation measures, such as noise mounds or barriers (if needed).

### Will BESS have any visual impact?

A BESS may have minor visual impacts depending how big it is, where it is located, how close it is to residents, and the amount of change to landscapes, views, or land use.

Our proposed Calala BESS will be located at 474 Calala Lane, Calala, about 5.8km southeast of Tamworth's CBD, New South Wales, and is about 550 meters from the nearest dwellings. Its remoteness will have little to no visual impact on nearby residents.

#### Project location





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## How will visual impacts be managed?

We engage technical experts to assess the site for any visual impacts. They assess a range of factors, including the number of people affected, changes to the landscape and views, extent of size and scale, and duration of project, use of land, and distance of the project to residents and public spaces. We also engage with local communities, providing them the opportunity to give feedback and raise concerns about any visual impact relating to the project in their area.

## Will BESS have any impacts on traffic?

We anticipate minor project-related traffic to occur during the construction of our BESS facility. Changes to traffic conditions may include:

- Increased traffic
- More heavy vehicles
- Temporary access and route detours
- Slower travel speeds.

## How will potential traffic impacts be managed?

We will engage independent technical experts to assess and mitigate traffic and transport impacts. They will assess local roads, intersections, and existing traffic volumes and estimate project-generated traffic.

This assessment will inform our Environmental Impact Statement (EIS) and the Construction and Environmental Management Plan (CEMP) for the Project.

We will undertake mitigation measures to reduce any identified impacts during construction and operation of our BESS facility. This includes preparing and implementing a Traffic Management Plan (TMP) in consultation with the Government transport agencies and Councils. We will follow this plan to ensure we manage traffic appropriately to minimise any impacts on local roads and residents.

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# Battery Energy Storage System (BESS)

## Managing Health and Safety FAQ

### Are there health impacts related to BESS?

BESS uses proven and safe technology to provide reliable, clean, affordable electricity. To date, technical experts have not identified any known direct health impacts associated with BESS facilities.

Our BESS must meet stringent Health, Safety and Environmental (HSE) standards set out by the Australian Government and Environment Protection Authorities, to ensure they are safe and reliable. Like a regular battery used to power electronic devices, BESS works similarly, but on a much larger scale, using extra components to make them safe and prevent faults.

### Are there electromagnetic radiation risks?

Technical and engineering experts, including the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), have found no known or documented electromagnetic radiation (EMF) impacts associated with big batteries.

We will use lithium iron phosphate or sodium-ion batteries for our facilities. Engineers have independently assessed and certified that the chemical process in these batteries do not produce electromagnetic radiation during operation.

Other components associated with energy generation (such as transmission lines) emit EMF at safe levels. We locate our BESS facilities near these lines to maximise the use of existing infrastructure and avoid building additional infrastructure.

### How will emergencies be managed?

We will adhere to prescribed processes, standards, and guidelines to deal with an emergency by adopting a comprehensive Emergency Response Management Plan (EMP). The plan will address emergencies in the area while setting out the management of all construction requirements, including safety, security, working hours, water, noise, dust, and traffic management.

### How will a fire hazard be managed?

Our BESS will be equipped with a Supervisory Control and Data Acquisition (SCADA) and a Battery Management System (BMS). Together, these will monitor for faults in real-time, including smoke and system temperatures, to ensure the BESS operates safely and can quickly shut down to mitigate fire risk. We will take other measures to minimise fire risks, including:

- Complying with guidelines, standards, and conditions to operate in accordance with the applicable legislations as set out by Government and regulating bodies
- Adhering to stringent fire safety measures set out in an Environmental Planning and Assessment (Development Certification and Fire Safety Regulation 2021)
- Adopting an Emergency Response Management Plan to outline the protocols and requirements for fires and other risks
- Activating a Risk Management Plan (developed with relevant fire authorities) to identify, assess, and outline controls to manage on-site and off-site risks at a BESS facility.



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## How will a bushfire hazard be managed?

We consider protection measures during the planning and design process to ensure our BESS facility meets fire safety requirements.

We will manage a bushfire hazard by:

- Having a Bushfire Risk Assessment conducted to assess if the site is located within the Bushfire Prone Area and affected by the Bushfire Management Overlay
- Building our facilities for local conditions using materials that are resilient to heat, wind, and bushfire impacts on generation and transmission
- Implementing an Environmental Management Plan to provide a framework to manage and address environmental issues and respond to bushfire management measures
- Activating a local Emergency Response Management Plan (ERMP), when dealing with emergencies such as a fire in the area.

## How will a chemical hazard be managed?

Chemical hazards can arise from acid or corrosive components leaking from a BESS. We will mitigate this risk by installing containment measures (as identified by the Environmental Protection Authority and planning authorities).

Our Construction Environmental Management Plan (CEMP), Supervisory Control and Data Acquisition (SCADA) and Battery Management System (BMS) will also help to identify, address, and manage dangerous goods and chemical hazards.

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