

# ARMIDALE EAST BESS FAQS

## General

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### Q. What is proposed?

A. FRV is proposing to construct and operate a 400MW Battery Energy Storage System (BESS) located 16 km east of Armidale NSW. The purpose of the development is to assist the national electrical grid at times of peak demand and in times of emergency.

### Q. Who is FRV?

A. FRV is the Project Developer for the Armidale East BESS. FRV is one of the world's leading renewable energy companies and was founded in Spain in 2008. With over 15 years of industry experience, FRV has over 50 renewable energy plants across four continents producing over 5GW of energy. FRV's current portfolio in Australia includes:

- Royalla Solar Farm – 24MWp – Operational since 2015
- Moree Solar Farm – 70 MWp – Operational since 2016
- Clare Solar Farm – 125MWp – Operational since 2017
- Lilyvale Solar Farm – 125MWp – Operational since 2019
- Goonumbla Solar Farm – 83.7MWp – Operational since 2020
- Winton Solar Farm – 106MWp – Operational since 2021
- Sebastopol Solar Farm – 90MWp – Operational since 2021
- Dalby Hybrid Project 2.45MW of solar and 5Mwh BESS – Operational since 2021
- Metz Solar Farm - 115 MWp – Operational since 2022
- Bluewater Solar Farm – 80MWp – Development Approval Received
- Ravenswood Solar Farm – 63MWac - Development Approval Received
- Walla Walla Solar Farm – 300MWac – Under Development
- Bluewater Solar Farm – 75MWac – Under Development
- Gnarwarre BESS – 250MWac – Under Development
- Terang BESS – 100MWac – Under Development

**Q. What is a BESS?**

**A.** BESS is an energy storage system that uses a group of batteries to store electrical energy from a variety of sources, including solar. The system compensates for the intermittency of sources, providing backup power to address certain constraints such as weather conditions and lack of grid space. They are crucial to the increased adoption of de-centralised power infrastructure models and the renewable energy transition in Australia.

**Q. Who approves the project?**

**A.** As a state-significant development (SSD), the project will be reviewed by the NSW Department of Planning, Housing and Infrastructure (DPHI).

**Q. What stage is the project at?**

**A.** In 2023, FRV commenced preliminary engagements and analysis to complete the initial stage of submitting a development application, called a Scoping Report. This report was submitted to the NSW Government Department of Planning and Environment (DPE) (now known as the NSW Department of Planning, Housing and Infrastructure due to a government restructure in January 2024) in December 2023 for acceptance and issuance of the Secretary's Environmental Assessment Requirements (SEARs) for the Environmental Impact Statement (EIS) phase. The Scoping Report was accepted by DPE, and SEARs were issued on Friday 23rd December 2023. The project is now working through the detailed assessment required for the EIS.

**Q. When will construction commence and how long will construction take?**

**A.** The construction start date is dependent on a variety of factors, including DPHI approval, selecting a construction company and receiving grid connection approvals, negotiation of a Power Purchase Agreement and completion of the Financial Close process. Once construction contractors are appointed, works on site are to take approximately 12 months.

**Q. How long will this project operate for? What will happen once the BESS reaches its end of life?**

**A.** The operational life of the project is expected to be 30 years. After this time, the site will either be decommissioned and returned to its original purpose as freehold land or, depending on future energy requirements, the project may be reutilised and upgraded, subject to landowner agreements and existing approvals.

**Q. Will FRV stay on as the project owner?**

**A.** Our approach is to develop and acquire BESS and large-scale solar energy projects to own and operate for the long term. FRV has sold assets in the past, but our core business model is to retain assets as this provides us with a sustainable return on investment and ensures we manage the running of our assets directly. For us, it is important that our assets are operated responsibly and perform well over their lifetime.

**Q. What will happen to the residual land?**

**A.** The residual land will remain as currently used.

## Design considerations

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### Q. What does a BESS look like?

A. BESS's are container-like modular systems that are configured based on site and capacity obligations and can be compared to shipping container-like objects. As technology improves, the systems are becoming increasingly efficient and more compact. An example of a BESS can be found in the image gallery section of the website, at [www.armidaleeastbess.com.au](http://www.armidaleeastbess.com.au).

### Q. Why has this specific site been chosen?

A. A combination of conditions needs to be analysed when selecting a site appropriate for a BESS. These key conditions help narrow the search to specific geographical areas. The choice of this location was driven by a combination of:

- Setbacks that minimise the impact on nearby properties
- Ideal connection point into the national energy grid through an existing transmission line traversing the site to the north of the development
- Excellent access to local and major roads.

Most suitable sites present some degree of restrictions such as creek lines, vegetation to be retained, etc. FRV works to incorporate these restrictions so that they can co-exist alongside the project's footprint.

### Q. Will there be any visual impact?

A. The location of the BESS is very remote, located away from main roads and is not within 3km of any residential properties. The BESS cubicles are unlikely to emit glare or reflection, and screening vegetation and fencing will be investigated as part of the EIS.

### Q. Will I be able to hear the BESS?

A. Like all large-scale developments, BESS facilities may generate noise, however, due to its location it is not expected to be heard by nearby residents of the community. Studies are ongoing to assess noise levels, the impact this may have on the area, and clear mitigation recommendations.

## Technical

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### Q. What type of BESS units will be used?

A. The design is still to be finalised; however, the latest technology will be used at the time of construction. BESS units also can be adapted to utilise updates in technology, and with FRV being a global leader in battery research and development, they are well placed to make these adaptations.

### Q. How high will the units be?

A. BESS units will be installed on low-lying structures and are expected to not exceed 5.5m above the natural ground level. It is expected that the project area will be at the same height or lower than other existing features in the landscape.

**Q. How will construction traffic and road impacts be managed?**

A. Access to the Subject Land is anticipated to be from a new access road that will be developed as part of the project. During the anticipated 12-month construction period, construction vehicles would range from light vehicles to 26 m B-Doubles. Light vehicles would arrive during AM/PM peaks with heavy vehicle deliveries to be spaced out during the day.

**Q. How will power supply be affected in the local area? Will there be outages during construction?**

A. There will be no outages expected during the construction phase. Once the BESS is built and operational, it will help to increase the grid stability.

**Q. Are there known health risks associated with living near BESS technology?**

A. There are no situations in which being in the proximity of a BESS can have adverse health effects. The operation of a BESS generates no emissions such as CO<sub>2</sub> or any other harmful gases.

## Environmental

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**Q. Will neighbouring livestock and crops be impacted by any 'heat island' effects?**

A. BESS units do not directly contribute to the urban heat island effect, as they do not generate any heat on their own, however; they can indirectly affect the urban heat island effect depending on their location and only temporarily through their construction management. As the Armidale East BESS will be in a rural area and on, the surrounding environment is not known to be a direct contributor to the heat island effect given its low density of human-made urban structures. Therefore, the combination of the BESS location with the surrounding environment will not pose a risk of contributing to the 'heat island' effect.

**Q. Do batteries increase fire risk?**

A. The Department of Planning, Housing and Infrastructure (DPHI) have Preliminary Hazard Analysis (PHA) guidelines for safety assurance of development applications. This process is applied as part of the EIS procedures under the Environmental Planning and Assessment Act 1979.

The objective of a hazard analysis is to develop a comprehensive understanding of the hazards and risks associated with an operation or facility and the adequacy of safeguards.

To mitigate potential fire risk from batteries the following steps are undertaken:

1. The substation and BESS have protection to avoid overcurrent or any electric faults to cause a fire
2. plant facility will have a Battery Management System or fire panel to detect smoke, fire, and action alarms
3. water tanks, water pipeline systems, and fire extinguishing tools will be installed on-site.

**Q. Is the site affected by flooding?**

A. Assessments completed to date indicate that the site is not flood-prone. In the unlikely event of stormwater flooding, where water may pool from heavy rainfall events, BESS infrastructure is expected to remain stable.

## Social and Economic

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**Q. How many jobs will be created by the construction of the project?**

A. Employment opportunities will range from skilled to manual labour, with jobs potentially reaching 120-150 during the peak of construction. Utilising qualified local content is always a key element for FRV when developing a project, and we intend to work with local service and product suppliers to stimulate the local economy. We strongly encourage local individuals to put forward their interest in employment either for labouring or as a supplier via our website at [www.armidaleeastbess.com.au](http://www.armidaleeastbess.com.au).

**Q. How many jobs will be available during the operations of the project?**

A. 5 to 8 permanent roles are likely to be required for the operation of the project. Maintenance contracts for panel cleaning, fence repair, road grading, etc. would also be required and would likely be met by local contractors.

**Q. Apart from job creation, what other benefits will the community receive?**

A. As the project will be operating for 30 years, we see ourselves as part of a community and are committed to delivering long-term investment in the regions and the communities in which we operate. Engaging with your community is essential to us and ensures that our project offers mutually beneficial economic and social outcomes.

We will be continuing to engage and update all stakeholders that have an interest in – or may be impacted by – the project and will use information gathered to develop the most appropriate community benefit programs that foster positive outcomes and provides value to the local community.

Benefits will also include potential road or intersection upgrades, diversified income within the community through increased revenue to ancillary services such as food and accommodation, and the delivery of clean, zero-emissions electricity to meet the region's energy needs.

**Q. Will there be always a contact onsite in case of emergency?**

A. The plant is fully maintained by FRV throughout the life of the project. There will be a 24/7 contact, and an Operations Manager and other staff members will be based near the project. The project will also be monitored 24/7 by remote CCTV.

**Q. What is a Power Purchase Agreement (PPA)?**

A. A Power Purchase Agreement (PPA) is simply a contract to buy power at a specific price. The 'Seller' in this type of agreement is usually a utility-scale generator e.g. Solar, BESS and Wind Farms. The 'Purchaser' in this type of agreement will have significant electricity requirements which allow them to purchase all or some of the output of a project. Examples of buyers include utilities, governments, and major corporates. Examples of companies that have entered into PPAs across Australia include Telstra, Mars, Blue Scope Steel, Snowy Hydro, UNSW, and Coles, with many others considering this option.