Palmerston Battery Energy Storage System

About the BESS

What is a BESS?

A Battery Energy Storage System (BESS) is large scale energy storage that stores and releases energy from the electricity grid to maintain a constant level of energy for consumers.

At times of excess supply in the grid, such as the middle of a sunny day, the BESS will charge by importing electricity from the grid. During times of lower supply, such as the early evening, the BESS will discharge, exporting electricity into and stabilising the grid. In repeating this cycle daily, it helps balance out intermittent energy sources, such as wind and solar power. In doing this, it also provides grid services to ensure the reliability and stability of the National Electricity Market (NEM).

A BESS comprises a number of "*enclosures*" or battery units (broadly resembling a shipping container), inverters, transformers and other electrical equipment. It also includes access tracks, water, tanks, offices, amenities and screening vegetation (See Concept Plan for further details).

BESS Benefits

Provides additional storage capacity for Tasmania and the National Electricity Market.

Increases energy reliability at times of low renewable energy generation.

Facilitates the transition of the grid to clean and renewable energy sources.

Assists in achieving Tasmania's 200% renewable energy target.











Example imagery of a BESS enclosure

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Project Details

Palmerston Battery Energy Storage System

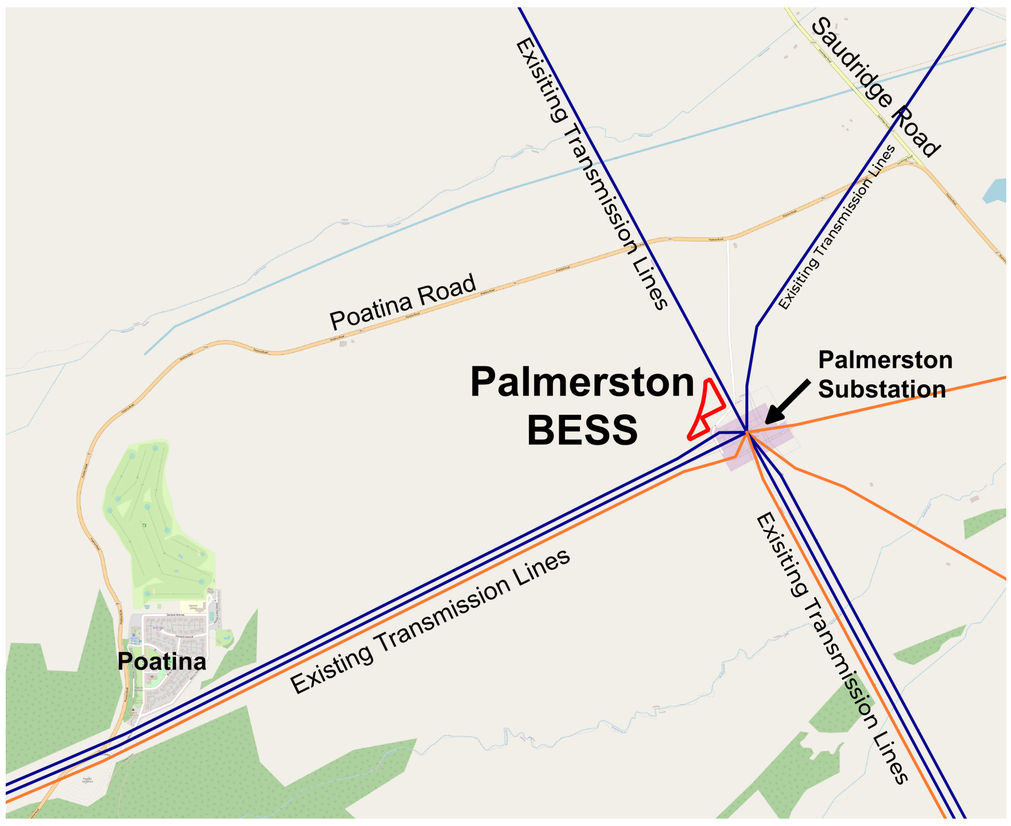
The proposed Palmerston Battery Energy Storage System (BESS) is designed to store and release energy and provide grid support services. It includes battery units, inverters, associated infrastructure, grid connection, access roads, vegetation screening and security fencing.

It is located on 1140 Saundridge Road, Cressy, adjacent to the Palmerston Terminal Station, approximately 2.3km east of Poatina, within the Northern Midlands Council. The site has an area of approximately 1.5 ha.

The BESS has a capacity of 100MW/200MWh and is able to store up to 2 hours of energy. It is proposed to connect to the Palmerston Terminal Station and more broadly into the wider Tasmanian electricity network as part of the National Electricity Market (NEM).

It represents a **$X-$X** Million project investment, resulting in the provision of 75-100 jobs during construction and 5-10 in operation.

The BESS will compliment Tasmania's renewable energy sources including hydro and wind farms, while ensuring reliable and affordable electricity supply. In doing so, it will assist in maintaining grid stability and contribute to Tasmania's energy transition and reduction in emissions.



Location of the proposed Palmerston BESS

Site Suitability

- Adjacent to Palmerston Terminal Station reduces the need for long distance power lines and visual impacts.
- Significant distance to closest dwellings.
- Relatively flat topographical conditions.
- Low flora and fauna values due to historic agricultural land use.
- Located outside regional settlement areas of Poatina and Cressy
- Close to the electricity grid with access to TasNetworks' transmission lines.
- Access to main roads for the transportation of project infrastructure.
- Located in the T3 Central Highlands Renewable Energy Zone (REZ) as proposed by the Australian Energy Market Operator (AEMO).

Design Considerations

Design will follow detailed guidelines as established by the TFS to mitigate and manage bushfire risks.

Design and layout will be undertaken in accordance with detailed noise impact assessments to minimise impacts for local residents.

Location chosen to avoid agricultural impacts and is outside the center pivot path.

Ecological assessments will ensure design and siting respects local environment and surroundings.

A hydrological study has been prepared to protect and enhance runoff and waterways.

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Meet the Project Team

Akaysha Energy

Akaysha Energy is a developer of BESS and renewable energy projects. Headquartered in Australia, they are made up of long-standing energy sector professionals, proven in the development and deployment of large-scale batteries and renewables. Akaysha is supported by Blackrock, one of the world's largest investors.

Akaysha is currently developing a number of BESS projects around Australia, including the Waratah Super Battery in NSW, one of the largest projects in the Southern Hemisphere.

Cogency Australia

Cogency Australia is a climate focused planning and engagement consultancy based in Melbourne, with projects spanning across the East Coast of Australia. Cogency specialises in the renewable energy, sustainable property and clean technology sectors.

Pairing their passion to give back to the community, with decades of renewable energy experience, Cogency is comprised of industry-leading professionals striving to make a difference.

Technical Consultant Team

Akaysha and Cogency have worked closely with a number of specialised technical consultants to design and plan the BESS. This has included assessing the project against the relevant standards, so the project meets Government expectations and minimises impacts.

The following technical reports have been prepared and form part of the Development Application, as currently being assessed by the Northern Midlands Council:

- **Planning Application Report**
  Cogency Australia
- **Fire Hazard and Risk Assessment**
  NJM Design
- **Flora and Fauna Assessment**
  Nature Advisory
- **Transport Impact Assessment**
  Pitt & Sherry
- **Noise Impact Assessment**
  SLR Consulting
- **Landscape and Visual Impact Assessment**
  Orbit Solutions
- **Aboriginal and Cultural Heritage Assessment**
  Cultural Heritage Management Australia

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Concept Plan



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Concept Layout Plan

2225 - Palmerston BESS

- Parcels
- Existing 220 kV Transmission Line

Proposed Features

- Battery Storage and Inverter Area
- Operations and Maintainence
- Native Vegetation Screening (5m)
- Water Tank
- Access Roads (4m)
- Parking
- Fence
- 220 - 33 kV Substation Extension
- 33 kV Underground Reticulation



Palmerston Battery Energy Storage System

Photomontage 1 - From Valley View Crescent, Poatina

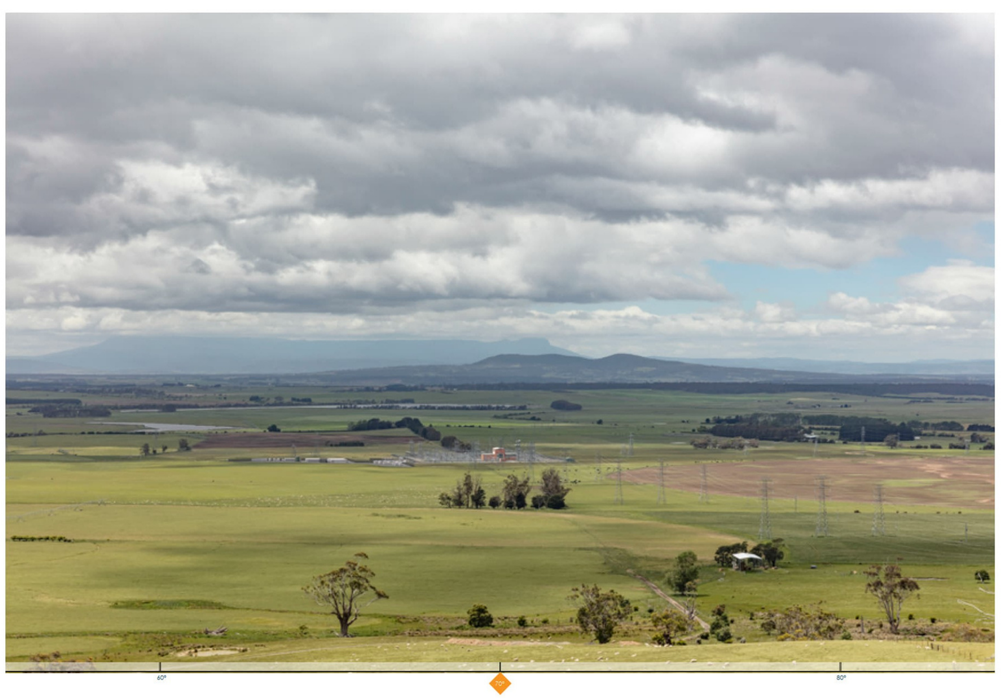
KOP 1: ORIGINAL PHOTOGRAPH



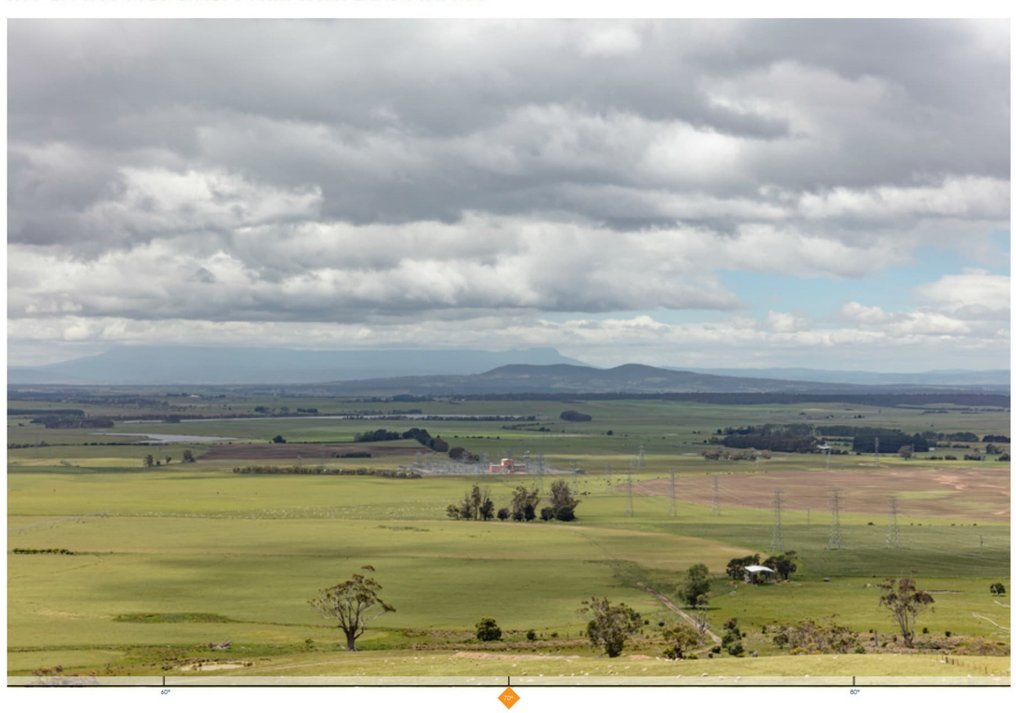
KOP 1: PROPOSED BUILDING OUTLINES



KOP 1: PROPOSED BUILT FORM



KOP 1: PROPOSED BUILT FORM WITH LANDSCAPING



orbit SOLUTIONS

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Photomontage - From Poatina Road, Poatina

KOP 2: ORIGINAL PHOTOGRAPH



KOP 2: PROPOSED BUILDING OUTLINES



Unoccluded silhouette of proposed built form (excludes vegetation)

Silhouette of proposed built form that is occluded by existing built form (excludes vegetation)

KOP 2: PROPOSED BUILT FORM



KOP 2: PROPOSED BUILT FORM WITH LANDSCAPING

