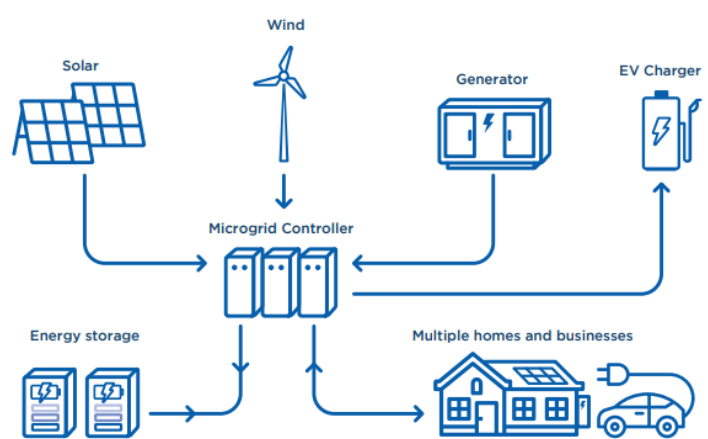




# Doomadgee Solar Farm and Battery Project - Frequently Asked Questions

**We have heard that you are building a microgrid – is this true, and what is a microgrid?**

Doomadgee’s electricity network is an isolated network, so it’s similar to a microgrid. A microgrid is a small-scale electricity network, powered by one or many distributed energy resources, like solar PV, wind, and diesel. With advances in technology, they are increasingly intelligent energy systems, designed to be self-sufficient and to power the electricity needs of a discrete group of customers, or small community like Doomadgee.



Microgrids can be operated either connected to, or stand alone from, the main electricity network. Doomadgee’s isolated network is a standalone microgrid, not connected to the main electricity grid.

## Why is the expansion of the Doomadgee Solar Farm and Battery project needed?

We are always looking for ways to modernise and future-proof our isolated electricity networks, so that we can reduce costs and the reliance on fossil fuels. Our isolated networks, like the one at Doomadgee, were originally designed based on the available technology of the day - diesel generators. Diesel generation presents challenges in that they produce high levels of emissions when the diesel is burned, and they require a minimum level of electricity load to function properly. Increasingly our customers are wanting to install their own solar PV on homes and businesses, which, if not managed correctly, can affect network stability. We support our customers' choice to install solar, so we need innovative solutions to support this take-up and still maintain network reliability, as well as reducing the amount of electricity produced from diesel. With the advances in technology over the past decade or so, we can expand the solar farm and battery at Doomadgee to continue to produce reliable power for the growing community while further reducing costs and emissions and limiting our impact on the environment.

## What is a BESS and what does it do?

BESS stands for Battery Energy Storage System, but these are commonly just called batteries. They are a type of energy storage system that uses batteries to store excess energy for use later. They come in various shapes and sizes, and they can use different technologies. They are essentially a rechargeable battery that can store excess energy, often from renewable energy sources like solar PV, that can be used later when it's needed, like at night when people come home and turn on their air conditioners and cook dinner. They also help with smoothing the power output when the solar system is intermittent, like when a cloud passes over. They play an important role in making renewable energy more readily available, for instance, not just when the sun is shining.

## Where will the Doomadgee Solar Farm and Battery extension going to be located?

Doomadgee's solar farm extension and battery will be located on the existing site of the Doomadgee Solar Farm on Castrick road. The below artist impression shows the existing solar farm and what will be added during the project.



## How will the project be delivered?

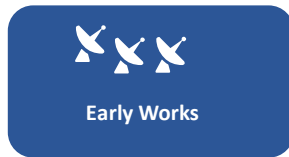
The initial phase of the project will involve preliminary civil works delivered by the Doomadgee Aboriginal Shire Council and Ergon finalising the scope work, followed by Stage 2 involving the solar farm design and build.

## Will local jobs be created from this project?

Our goal is to be a trusted energy advisor for our stakeholders and to ensure insights from our First Nations and isolated communities genuinely and transparently inform our decisions. We are wanting to engage respectfully to negotiate land use and any associated economic legacy.

We are also looking to support social benefits from the clean energy transformation, embed First Nations land stewardship, preserve and protect cultural heritage, and ensure the potential economic benefits are shared.

# Project Stages



## Early Works – Solar Trackers Decommissioned

To prepare the site for the new solar farm, some early civil works will be undertaken in October 2024.



## Stage 1 – Solar Farm and Battery Tendering

The first stage of the new solar and battery farm project, is to go out to tender for the contractor who will construct the new solar and battery farm. Tender applications will be reviewed and assessed, and the successful tenderer awarded the contact. This stage commenced in December 2023 and was completed in June 2024.



## Stage 2 – Solar Farm Design and Build

Stage 2 of the project will see our Isolated Systems Team finalise the design expansions of the Doomadgee Solar Farm. The new solar farm will then start to take shape on the ground as the successful contractor completes the civil and electrical construction to build the new solar farm on the existing site. This stage will commence in May 2025 pending wet season access.



## Stage 3 – Battery Design and Build

Stage 3 will involve the design and construction of the batteries and inverters. During the design phase the team will design how Doomadgee's solar, batteries and diesel generator interact into a single integrated system. Stage 3 will commence in end of 2025 and be completed mid 2026.



## Stage 4 – System Integration and Commissioning

The fourth and final stage of the project is system integration and commissioning. During this stage, our technical experts will test the system to ensure all aspects of the intelligent microgrid system are integrated and operating properly. They will conduct a range of tests to ensure safe operations and performance before commissioning the system to power the Windorah community. This final stage of the project will run from April to December 2025



## Community Engagement Activities

Our community engagement involves getting to know the Doomadgee community. We'll undertake a range of engagement activities including, sitting down with the Council and the community, to explain the project, introducing some energy literacy education, and working together on some of the options for the project. We'll also be creating new site signage for the expansion of the Doomadgee solar and battery farm.

## Get in touch with us

Don't hesitate to contact Karina Hocke, in our community engagement team, on 0439 145 940 or email us at: [NetworkProjectEngagement@energyq.com.au](mailto:NetworkProjectEngagement@energyq.com.au)



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