

Community Profile

Doomadgee



Doomadgee Solar Farm and Battery Project -Community Profile

About Doomadgee's solar farm expansion and battery project

We're working to improve the sustainability of our isolated electricity networks, in line with the Queensland Government's renewable energy targets. This journey will see us introduce more renewable generation into the communities' power supply, along with batteries to store the clean energy generated for use when needed.

It's about Caring for Country and, at the same time, ensuring our First Nations and remote communities share in the benefits of clean, reliable, and affordable energy into the future.

Transitioning to renewable energy will future proof the energy systems. Decarbonising the electricity supply reduces our reliance on fossil fuels – on diesel generation – it's a big positive for the environment. It can also provide economic and other community benefits through rooftop solar, as well as further electrification and energy efficiency measures.

As we progress, it is important that the community is part of the conversation. The transition will require community input and support, as well as a significant investment, to put in place the right solutions.

About the Doomadgee community

Doomadgee is a proud Aboriginal community located in the Gulf of Carpentaria, approximately 140km from the Northern Territory border, 93km west of Burketown and around 1,000km west of Cairns, situated alongside the Nicholson River. It is also located near one of the most popular natural tourist attractions, the Lawn Hill National Park.



There are around 1,390 people living in and around the traditional homelands of the Gangalidda and the Waanyi people, who are recognised as the Traditional Owners of the region surrounding Doomadgee.

The original mission, known as 'Old Doomadgee', was established in 1933 and by 1936 the community relocated to Nicholson River (the present site) due largely to cyclone destruction, population growth and the demand for additional freshwater supply.

In 1969 the Queensland Government was appointed trustee of the reserve on which Doomadgee was located and by 1985 the Doomadgee community elected 5 councillors to constitute an autonomous Doomadgee Aboriginal Council.

On 21 May 1987, the Aboriginal reserve was transferred from the Queensland Government to the trusteeship of the Doomadgee Aboriginal Council under a Deed of Grant in Trust (DOGIT) and by 1 January 2005, the Doomadgee Shire Council became the Doomadgee Aboriginal Shire Council.

Doomadgee is a thriving and vibrant community offering a variety of youth activities with beautiful pathways for people to stroll along and visit the river or use it as an exercise track for health and fitness.

The electricity network at Doomadgee

The town's electricity is supplied via an isolated microgrid, powered by diesel generation at the local power station on the outskirts of town. The nearest Ergon depot is located at Normanton, over 300km from Doomadgee.

Doomadgee's electricity is supplied by a diesel power station on Knott Street, the solar farm on Castrick Road, and a growing investment in rooftop solar, connected to a low voltage electricity distribution network with a safe capacity of 1713kW. The system delivers over 434GWh of electricity each year and can meet a maximum demand at any point in time of 4MWh. The power station has four generation sets with a capacity of 2.6MW and the solar farm can feed in 1.3MW.

The solar was initially installed in July 2014 as a 264kW solar farm to offset approximately 8% of the diesel generation used by the community to achieve renewable energy penetration of approximately 55%. Since the installation the solar farm has proven the technical viability and system reliability of a high penetration solar photovoltaic/diesel hybrid system.

It has also helped reduce the cost of energy generation in the community – saving over 680,000 litres of diesel and \$1.36 million per year, reducing greenhouse gas emissions at the site by over 50%.

Supporting technologies such as an advanced control system, low-load diesel, stability control and diesel-off capability will also be integrated.

With the technical capability developed from this project, we are now expanding the system further and rolling out high-penetration renewable/diesel hybrid systems into other isolated communities.



How we are caring for Country, and decarbonising Doomadgee's isolated electricity network

The Doomadgee Solar and Battery Farm project will significantly reduce diesel emissions and the project will mean over half of the energy supplied to the community each year will be renewable energy. The investment in energy storage will allow the system to maintain the system voltage in 'grid forming mode' and even allow the diesel gensets to be turned off at times.

Together this will save around a million litres of fuel a year, cutting greenhouse gas emissions by over 50%. It will also cut operating costs and extend the life of the diesel gensets.

This is an important resilience initiative for the Doomadgee community, which is often affected by seasonal flooding and heavily reliant on getting supplies and community members in/out of community via flights. The investment will further alleviate the amount of fuel needed to be stored in case of extended wet seasons when access to the community can be cut for prolonged periods. The road upgrades to the site and plans for the extension have considered one in 100 hundred floods.

Get in touch with us

To find out more, don't hesitate to contact Karina Hocke, in our community engagement team, on 0439 145 940 or email us at: NetworkProjectEngagement@energyq.com.au



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