



GLADSTONE SDA ENERGY HUB

About the project

Private Energy Partners is proposing to build an Energy Hub, within the Gladstone State Development Area (SDA). The project, located 7km from Mount Larcom and 25km from Gladstone, is a multi-technology solution consisting of gas turbines and a Battery Energy Storage System (BESS). The Energy Hub would combine energy generation and energy storage.

The project is planned to be delivered in three stages. At full capacity, it would be able to generate about 1,080 megawatts (MW) of electricity via the gas turbines, and store and dispatch about 780 MW via the BESS.

The project would support network reliability by supplying dispatchable energy to stabilise power supply during times of high demand, low generation and unplanned outages. The Energy Hub would supply existing Gladstone industry and support new industry in the area.

The Energy Hub would be operational for about 25 years, with a potential 25-year extension after a facility overhaul. This would create local jobs and contracting opportunities for the people of Mount Larcom, Yarwun and surrounding communities for years to come.



About the gas turbines

The open-cycle gas turbines would support the Gladstone region by delivering reliable gas-generated power to homes, businesses and local industry.

This type of generation is a highly responsive, efficient and flexible energy solution, capable of being activated and deactivated quickly to meet changing power network demands. Gas turbines can also operate for multiple days to support demand during periods of low power supply to the network.

The project is still in the design phase. We will continue to provide updates as the design progresses, including details about the number and height of the turbines.

Subject to the final design, the project intends to use natural gas from existing nearby pipelines to power the turbines. The turbines could also run on alternative fuel sources.

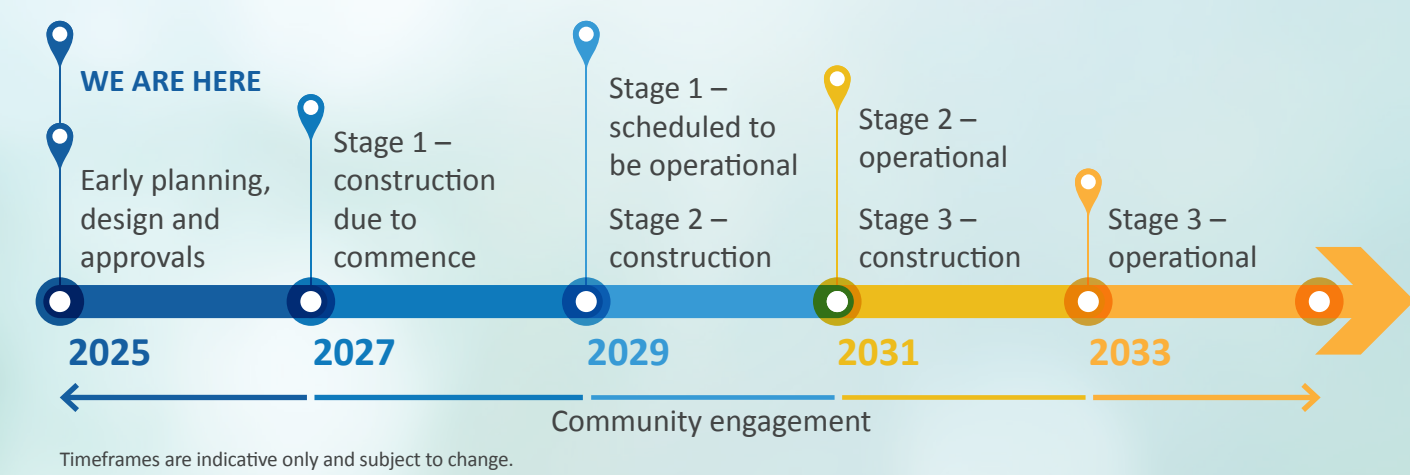
The energy generated by the turbines could be supplied directly to the grid via high voltage transmission lines connected to Powerlink’s Larcom Creek Substation.

Key turbine facts

- About 1,080 MW capacity
- Fast start – 5-10 minutes from cold to full output



Project timeline



About the Battery Energy Storage System (BESS)

We plan to build the BESS in three stages and at full capacity it would be able to store about 780 MW for eight hours. This energy can be released back into the grid during times of low supply or high demand, helping reduce electricity waste and maintain a more efficient, secure and reliable energy system.

BESS system components

The BESS would use industry standard grid-scale Lithium Iron Phosphate (LFP) batteries, one of the safest options for large-scale energy storage. LFP batteries safely operate across a wider temperature range and store more energy per unit than other batteries. This makes them ideal for safely storing large amounts of electricity for quick release when the network needs it.

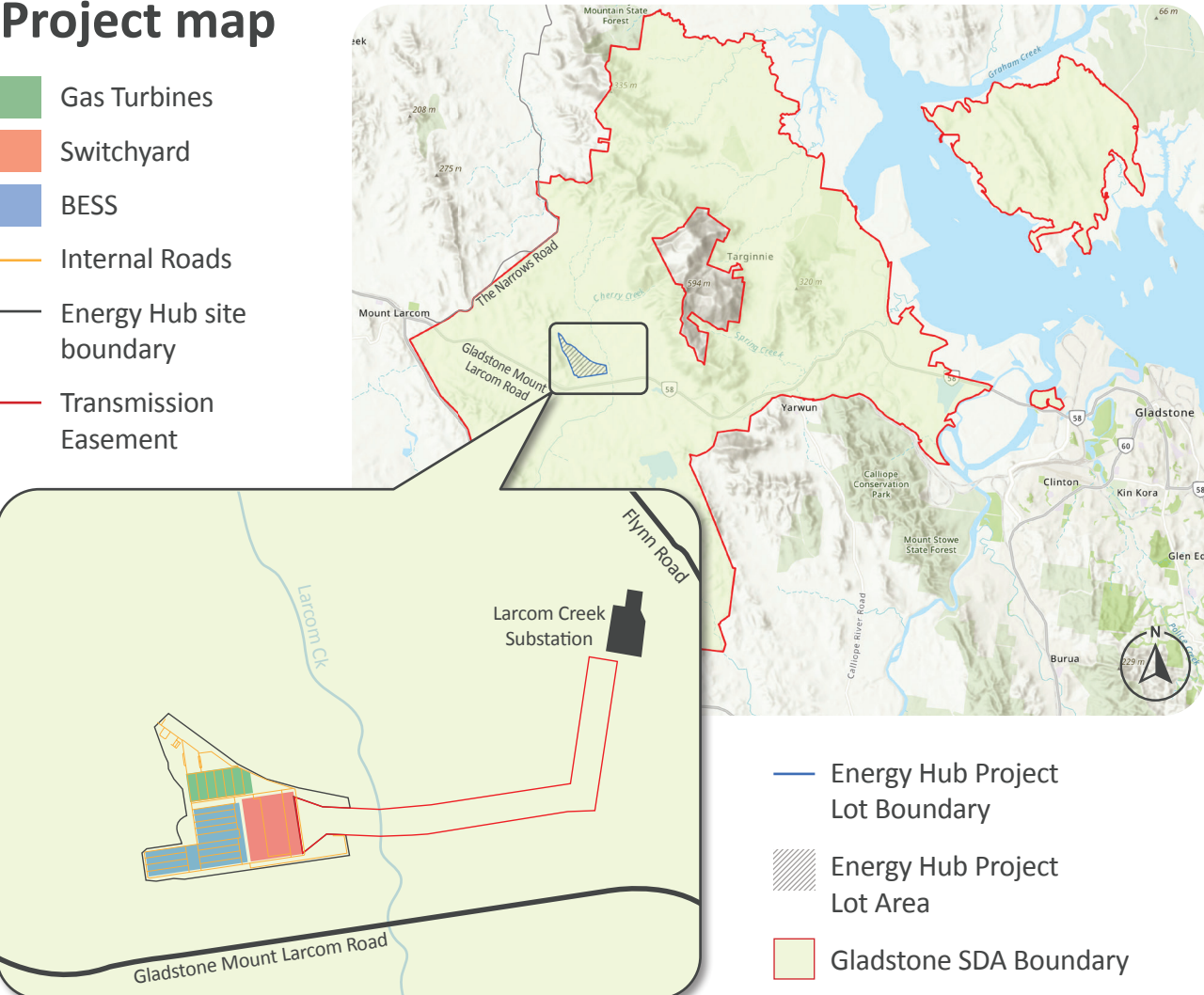
These LFP battery cells would be arranged inside modules, which would be stored in racks, similar to cabinets. Several racks would be installed within shipping containers. A Battery Management System would prepare the energy for release into the grid when it is needed, converting stored Direct Current (DC) energy into Alternating Current (AC) energy, and adjusting voltage levels as required. These batteries are different to the Lithium-ion batteries used in mobile phones and electric bikes.

Key BESS facts

- Stores about 6200 MWh of energy from the grid
- Would operate for about 25 years

Project map

- Gas Turbines
- Switchyard
- BESS
- Internal Roads
- Energy Hub site boundary
- Transmission Easement

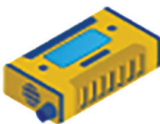


STEP 1



BATTERY CELL

STEP 2



MODULE

STEP 3



UNIT

STEP 4



INSTALLATION

Indicative diagram of how battery cells are stored.

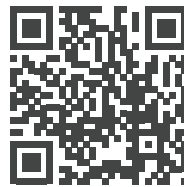
Partnering with the community

We are committed to supporting the Mount Larcom, Yarwun and Gladstone communities and safeguarding the environment. Private Energy Partners proposes to develop the Energy Hub in a way that delivers meaningful benefits to the local area, while minimising impacts. Our focus includes creating jobs and business opportunities for locals, protecting wildlife and native vegetation, addressing fire hazards, weeds and pests, reducing noise and visual disturbance, and minimising the impact of construction traffic on local roads.

We will engage with the local community during the development of the Energy Hub. This will include providing regular project updates and working with the community to develop a Community Partnership Program so project benefits are targeted at local needs.

Find out more and stay updated

For more information about the Energy Hub and to subscribe to receive project updates, please scan the QR code to visit our website, private-energypartnerscommunity.com.au, email community@private-energypartners.com or call 1800 975 039.



About Private Energy Partners

Private Energy Partners is Australian founded, owned and operated. We are an affiliate enterprise of Quinbrook Infrastructure Partners (Quinbrook). Quinbrook is a global business founded in 2015 by Queenslanders who have invested in more than 200 low carbon, renewable, storage, gas and critical minerals projects over the past 25 years. Private Energy Partners is Quinbrook's dedicated development, delivery and operations service provider, specialising in renewable energy projects across Australia, the US and UK.



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