

Powerlink webinar

SuperGrid planning update

30 July 2024



Powerlink acknowledges the Traditional Owners and their custodianship of the lands and waters of Queensland and in particular the lands on which we operate.

We pay our respect to their Ancestors, Elders and knowledge holders and recognise their deep history and ongoing connection to Country.



Disclaimer

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Thank you

Agenda

Queensland Energy and Jobs Plan (QEJP) objectives

Queensland SuperGrid Infrastructure Blueprint update

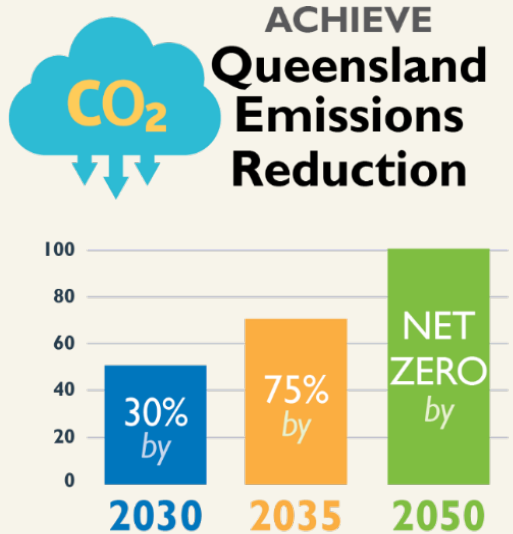
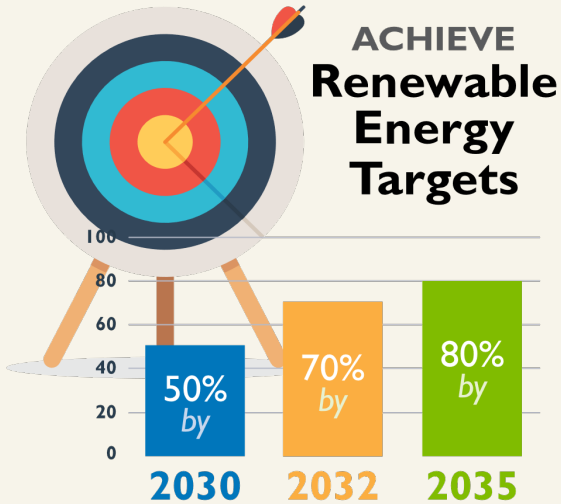
Next steps

SuperGrid update

Stewart Bell, EGM Network and Business Development



Queensland Energy and Jobs Plan objectives



Connect **25GW** WIND & SOLAR in Queensland Renewable Energy Zones by 2035

Develop at least **6GW** PUMPED HYDRO

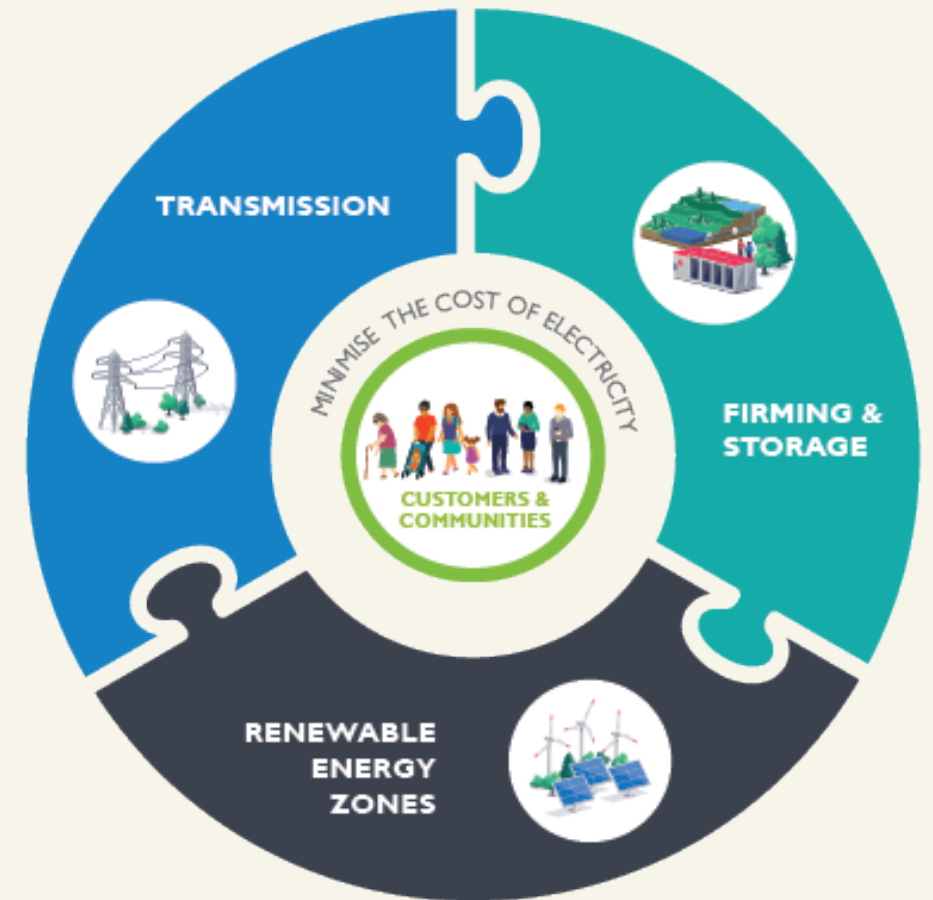
Support growth of utility scale **BATTERY STORAGE**

Deliver a **climate positive** Brisbane 2032 Olympic & Paralympic Games

Queensland SuperGrid

The Queensland SuperGrid is all of the elements in the electricity system, including the towers, poles, wires, solar, wind and storage that provides Queenslanders with clean, reliable and affordable power for generations.

- Together, renewable energy, storage (from pumped hydro and batteries) and the transmission network form the foundations of our future energy system in Queensland.
- Investment in the transmission network is critical to connect new large-scale renewable energy projects.
- The optimal infrastructure development pathway is detailed in Queensland Government documents.



Original Queensland SuperGrid Infrastructure Blueprint



Original Queensland SuperGrid Infrastructure Blueprint

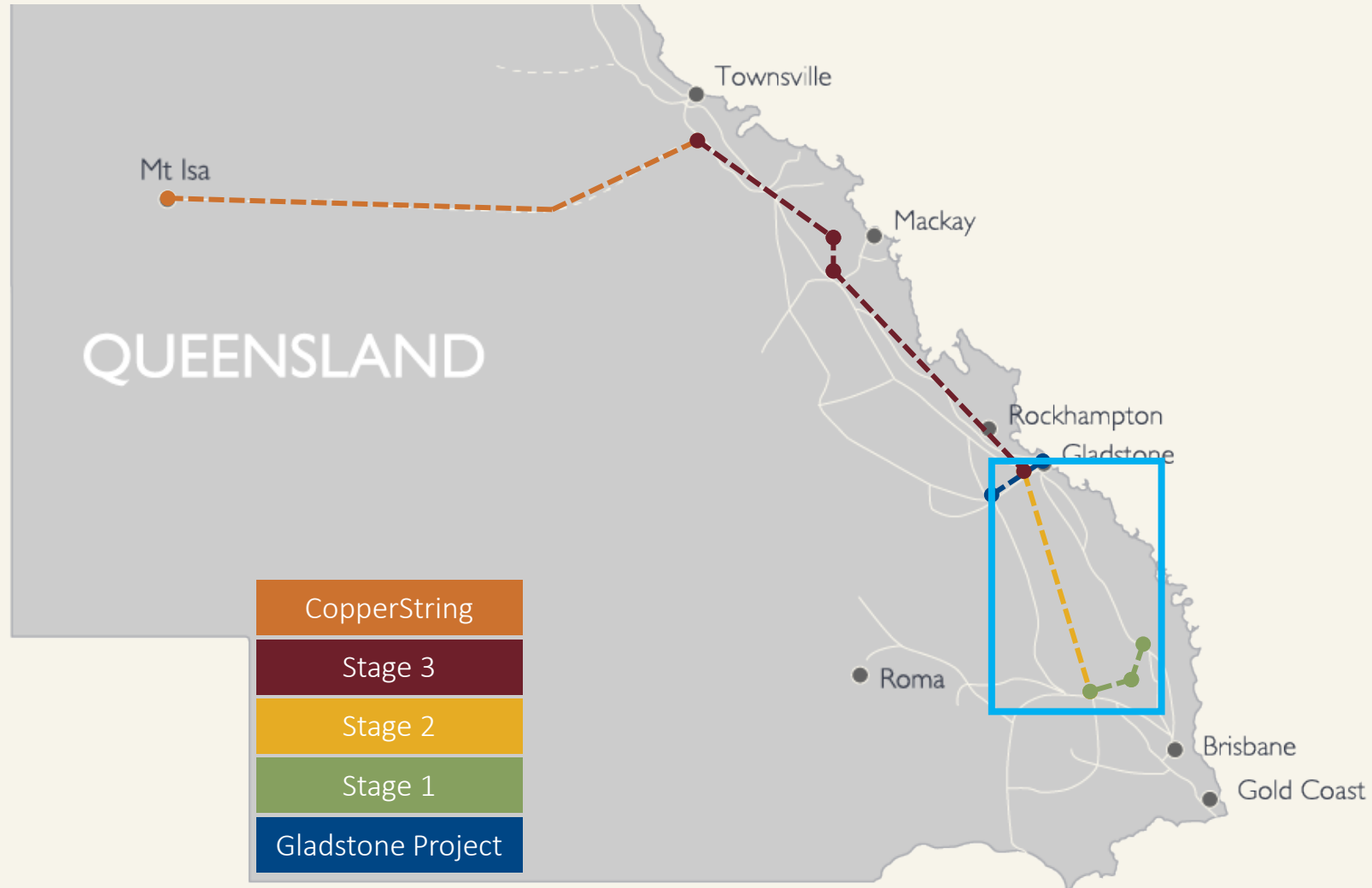
Stage one:

- High-capacity connection between Halys (near Kingaroy) and Woolooga (near Gympie) for the bulk transfer of power at **up to 500kV**
- Connection of the Borumba Pumped Hydro Energy Storage (PHES) project into the new transmission line

Stage two:

- High-capacity connection between Woolooga and the major Central Queensland load centre of Gladstone at **up to 500kV**
- Increase transfer capacity between Southern Queensland (SQ) and Central Queensland (CQ) to meet predicted load growth and flows between the regions
- Support renewable generation connections between SQ and CQ

Updated Queensland SuperGrid Infrastructure Blueprint



Updated Queensland SuperGrid Infrastructure Blueprint

Stage one:

- High-capacity connection between Halys and Woolsloga for the bulk transfer of power at **275kV**
- Connection of the Borumba Pumped Hydro Energy Storage (PHES) project into new transmission line
- Change in voltage still allows for full operation and capacity of PHES project

Stage two:

- High-capacity connection between Halys and Gladstone at **up to 500kV** – along an inland route
- Allows for connection to be built in stages and paced to align with interest for renewable connections
- Voltage level can also be staged to operate originally at 275kV before possibly converting to 500kV, to defer costs until the full transfer capability is required

Benefits

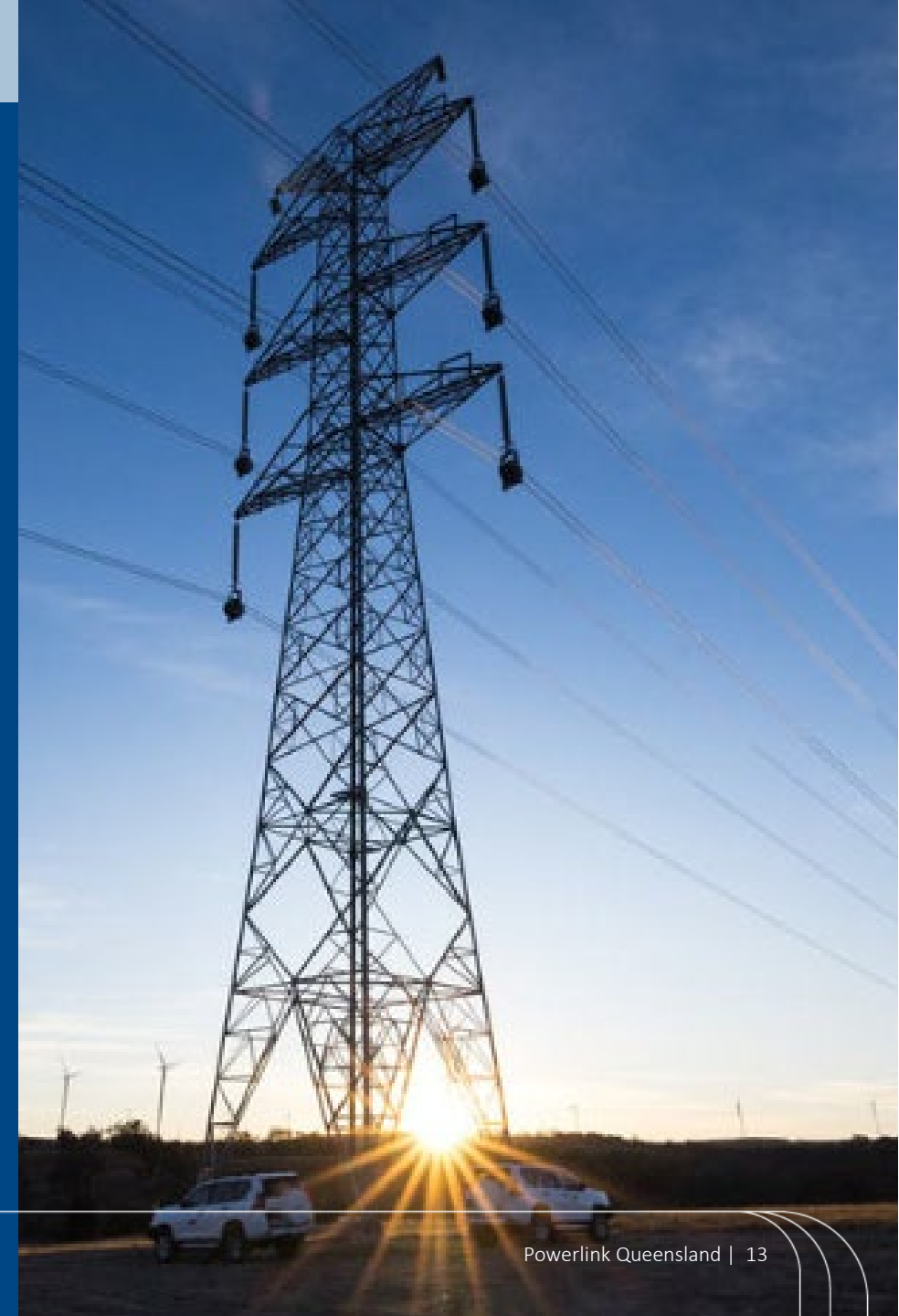
- Inland connection is closer to higher levels of potential wind generation – unlocks significant amounts of new renewable energy
- Results in lower costs for wind generation connections, reducing overall energy costs for Queenslanders
- Proposed developments between Woolooga Substation and Gladstone (previous stage two) can connect to the existing 275kV network
- Enables voltage of Halys to Woolooga Substations (stage 1) to be reduced from a potential 500kV to 275kV



Next steps

We will now focus on:

- Continue to work closely with developers to understand scope and timing to progress stage 2 of the SuperGrid
- Commence work on a study area and engagement with landholders, Traditional Owner groups, communities and other stakeholders in 2025.



Questions?