

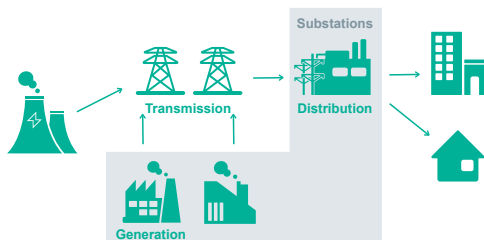
EnergyConnect Factsheet - Substations

2023

What is a substation?

A substation is a collection of electrical equipment located in one central location. It is the key pathway for electrical generation, transmission and distribution. A substation transforms voltage from high to low or from low to high as necessary from generating stations to the network that powers your home, business and the community.

Substations - Electricity Network, the Grid



Types of substations

Substations can either be gas insulated or air insulated. On EnergyConnect we will be building air insulated substations, more commonly known as outdoor substations. These substations have busbars, switchgear components and all other switchboard equipment installed outside.

Substations are made up of many elements:

- Switchyards
- Power Transformers
- Primary Plant made up of circuit breakers, disconnectors, current transformers, voltage transformers and surge arresters.
- Secondary Systems which monitor and control the electricity grid. These are installed in modular buildings in Australia.



Existing Buronga Substation and extension construction works

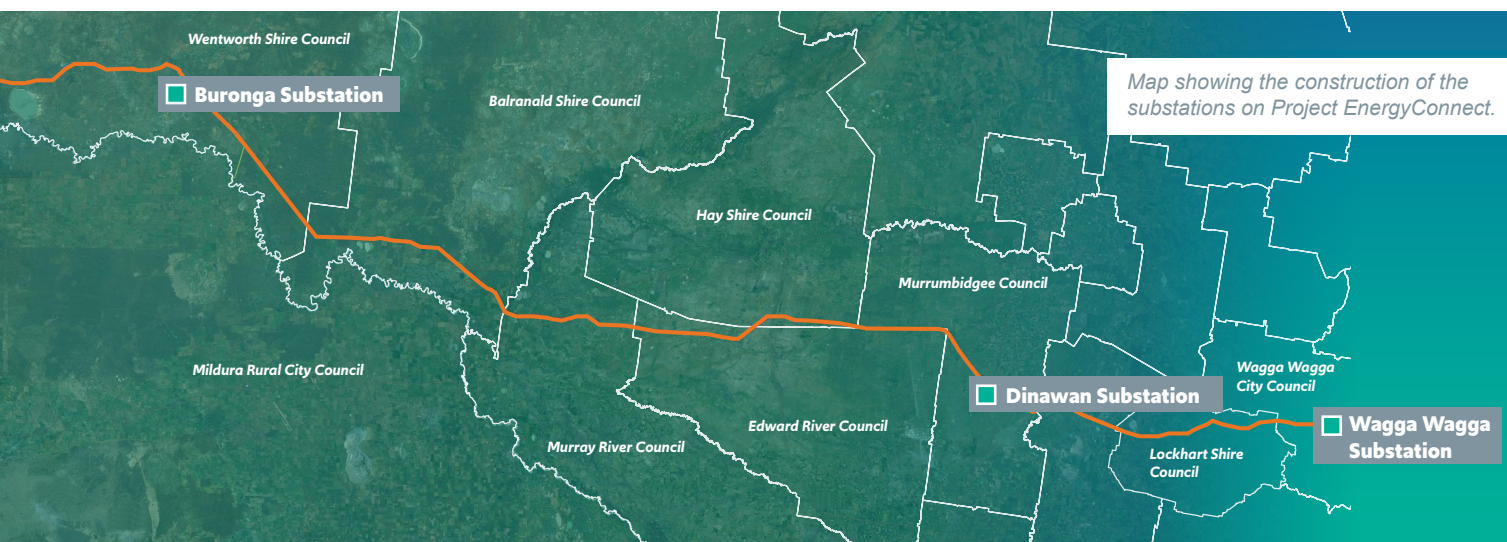
What are we building?

On EnergyConnect, SecureEnergy will build three substations. An existing 220 kV substation at Buronga will be extended by 20 soccer fields (over 14 hectares) and upgraded to 330 kV. Once completed it will be more than 16 hectares in size, making it one of the world's largest and most complex substations. Due for completion in 2024, this substation will help to deliver the critical milestone of first power flows between NSW and South Australia.

A new 330 kV substation – Dinawan (located near Coleambally) will enable better power flows between NSW, Victoria and SA. It will support the development of new electricity generation in nominated renewable energy zones in the region.

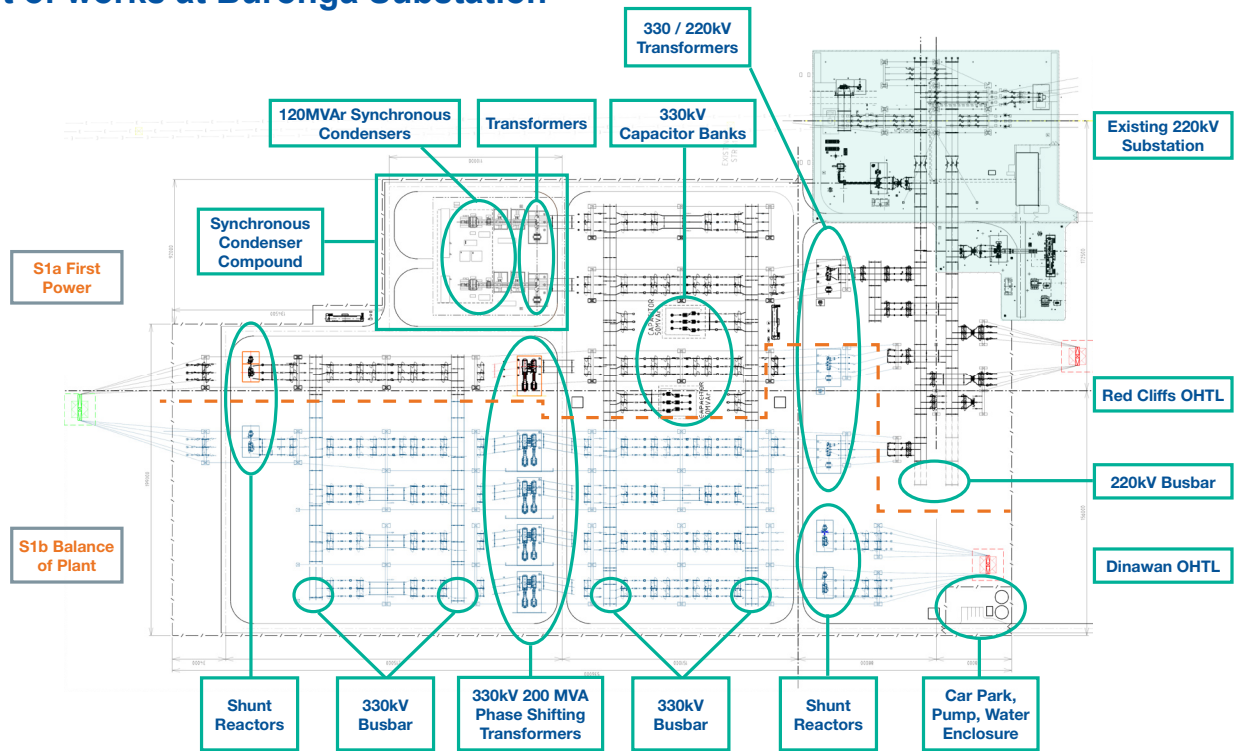
The 330 kV substation at Wagga Wagga will be extended. The expansion of the Wagga Wagga substation will accommodate the new transmission line connections. This includes the installation of new line bays along with associated electrical and civil works.

All three substations will facilitate the sharing of electricity across three states and the delivery of renewable generation to millions of homes.



Map showing the construction of the substations on Project EnergyConnect.

Layout of works at Buronga Substation



Did you know?

EnergyConnect is a global project with large, specialised equipment originating from different factories around the world including Australia, Austria, South Korea, China, Sweden, Italy, France, India and the United States of America.

This equipment includes:

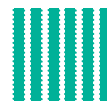
- 4 Synchronous Condensers
- 5 Phase Shifting Transformers
- 4 Capacitor Banks
- 8 Shunt Reactors

Power Outages

As part of commissioning of any new substation some planned power outages need to take place to transfer power from one source to another and ultimately to improve the network. This is a normal occurrence on electricity grids. Each outage is expected to affect only a handful of residents and businesses. SecureEnergy will consult with any affected stakeholders at least two days before the outage occurs. It is expected these outages will only last for a short duration of time.

These outages are not expected to occur until mid to late 2023.

Substation Fast Facts



	Soccer Fields	Soil Fill (m3)	Concrete (m3)	Rebars (tons)	Primary Plant	Steel Structures (tons)
All Substations	27	241,000	23,900	15,700	650	1,530

Keep Updated on EnergyConnect

There are several ways to contact the project team. Contact the SEJV Community and Stakeholder Engagement Team on:

☎ 1800 49 06 66 (free call)

✉ community@secureenergyjv.com.au

If you are a landholder impacted by the project, you can contact your assigned Land and Property Access Officer directly.

Log on to www.transgrid.com.au/energyconnect to subscribe to the e-newsletter.

For more information about the project go to www.secureenergyjv.com.au/projects/energyconnect