

EnergyConnect

Transmission towers

FACT SHEET

EnergyConnect

EnergyConnect is one of the nation's largest energy infrastructure projects and includes the construction of a transmission line connecting New South Wales, South Australia and Victoria.

The interconnector will be around 900 km long and expand the wholesale electricity market across the three states, meaning increased reliability and security of electricity supply, and lower power bills.

Supporting infrastructure will also be built or upgraded, including a new substation between Buronga and Wagga Wagga.

Transmission towers

Several different types of structures are used to support transmission lines. Towers or poles can be made of steel, concrete or wood and are used in Australia and around the world.

To determine which towers are suited to each location, Transgrid will consider many factors including safety, environmental and ground conditions and minimising impacts on existing land use.

The transmission towers for EnergyConnect will be a combination of guyed and self-supporting towers. The towers will be typically spaced between 400 and 600 m apart and range in height from 30 to 65 m.

We anticipate the majority of towers for EnergyConnect will be guyed towers..



Guyed transmission tower

Types of towers

Guyed towers

Guyed towers are structures with a central steel column supported by four high-tensile steel cables (guy wires), each 35 mm thick. The guy wires are anchored to the ground providing the structure strength and stability.

Guyed towers are used extensively around the world and in parts of Australia. They are particularly well suited in areas with relatively flat terrain.

The guyed towers will be up to 60 m high, with the guyed wires extending out to create a square footprint of around 50 x 50 m.

Benefits of guyed towers

- Less impact to the land and environment due to a smaller construction footprint
- Less visually intrusive due to a narrower central mast
- Additionally, guyed towers are typically quicker and safer to construct and maintain than self-supporting towers due to the reduced time required to work at heights

Self-supporting towers

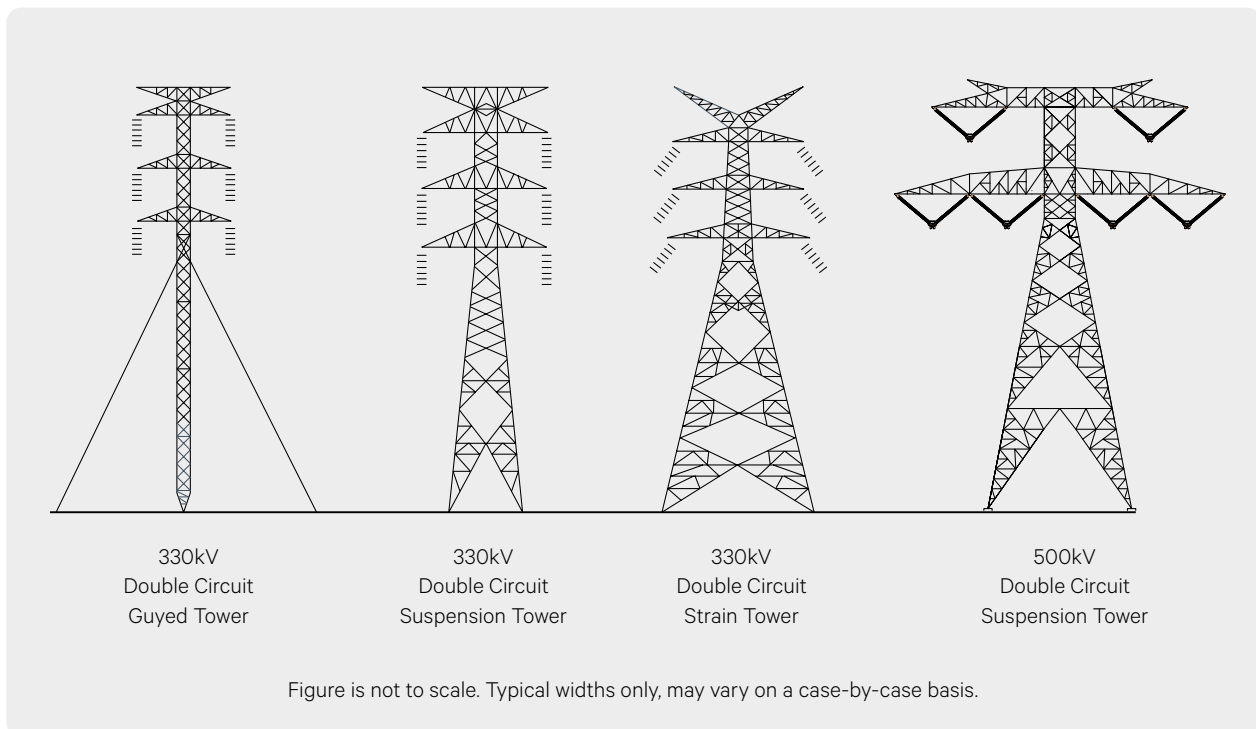
In some circumstances, guyed towers are not able to be used. This could be due to several factors, including the topography of the local environment. In these circumstances, self-supporting towers will be used.

Self-supporting towers are supported by four legs with individual foundations.

The height of self-supporting towers will range from 40 to 65 m with square footprints of up to 26 x 26 m.

Benefits of self-supporting towers

- Facilitating turns and angles
- Suitable in locations with sloping terrain



Transmission towers, easements and operations

Transmission towers will be located within easements that allow our staff and contractors access to construct, operate and maintain infrastructure. The land within the easement can still be used for various activities, including:

- agricultural activities, including cropping and grazing
- operating mobile plants and equipment
- non-electric fencing, yards and single post signs
- parking and storage, up to certain heights
- domestic recreational activities.

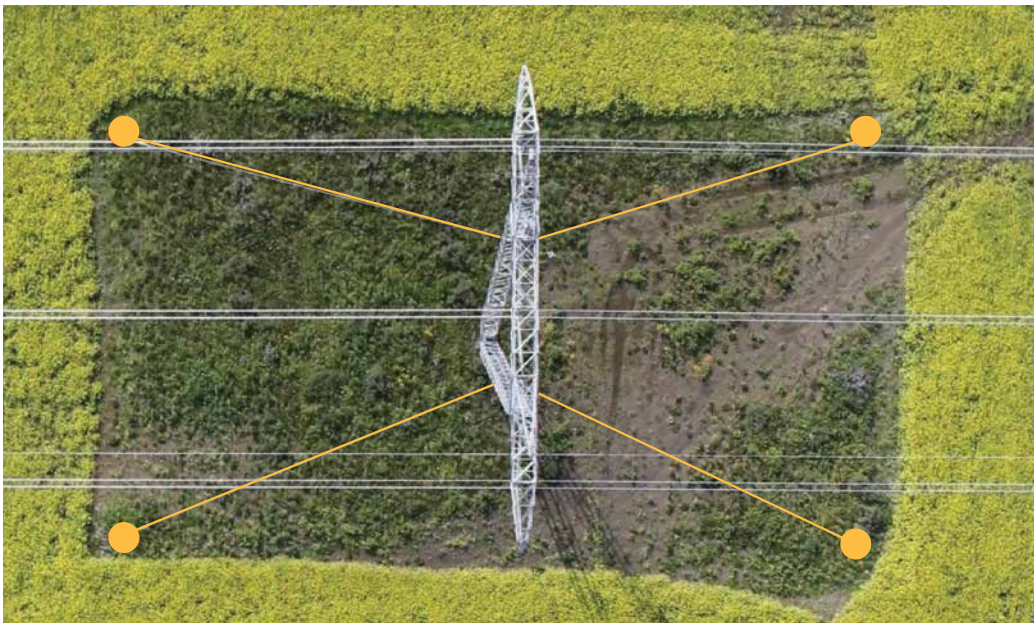
Certain activities are restricted to protect you, our staff and the network. Our [easement guidelines document](#) contains detailed information about permitted developments and activities, those that require our permission and those that are prohibited.

Once operational, you can seek advice or permission on activities within the easement via our [Easement Enquiries Portal](#).

Examples of farming operations with guyed towers



Farming operation with guyed tower installed (navigating between guy wires and centre mast). Yellow dots identify guy attachment locations.



Farming operation with guyed tower installed (avoiding area between guy wires and centre mast). Yellow dots identify guy attachment locations.

Construction, maintenance and safety

Construction

Construction activities include clearing and grubbing, tower foundation, tower erection, stringing the conductors and site rehabilitation.

The transmission line towers will typically be assembled in sections on the ground and lifted into place using cranes.

Any disturbed areas will be stabilised and appropriately rehabilitated as soon as feasible and reasonable after construction. We will consult with the landowner to plan this work.

Maintenance

Cleaning and maintaining the towers is important for them to function properly and be used for a number of years.

Towers will be inspected regularly from the ground and air and by our personnel climbing the tower.

Safety

At Transgrid, the safety and welfare of people and communities is our highest priority.

The minimum level of protection on guyed towers will be reflective sleeves on guy wires to provide maximum visibility in poor light conditions.

For guyed towers adjacent to private or dirt access roads, bollard protection or landscaping may be considered for guy wires.

For guyed towers in farmland with livestock grazing, we are taking measures to ensure the towers and guys pose no threat for entanglement of livestock.

Comprehensive information about **living and working with electricity** transmission lines is available on our website.



Mast bollards



Reflective sleeves on a guyed tower

Find out more

Visit transgrid.com.au for fact sheets and information on these topics:

- High voltage transmission lines
- Electrical safety
- Easement guidelines
- Electric and magnetic fields
- Fencing guidelines

Connect with us

Transgrid is committed to working with landowners and communities through the construction of EnergyConnect. Please connect with us if you need any information.



1800 49 06 66 (free call)
pec@transgrid.com.au
transgrid.com.au/energyconnect

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transgrid.com.au/ecsubscribe