

Eyre Peninsula Link

Transmission Line Construction

Landholder Information

This information sheet outlines the key stages and activities undertaken during construction of a high-voltage transmission line.

Before any construction activity begins, a significant amount of planning is undertaken. This includes selecting the route, designing the project, and gaining required approvals including environmental and landholder. Planning a new transmission line can take years before construction begins.



Construction of a transmission line key activity stages:

1 Access and Clearing

Access to each structure location is required for machinery and equipment.

This stage involves:

- Construction or improvement of agreed access tracks
- Vegetation clearance where required and approved
- Establishment of a level work area at each structure site.

Machinery used for access and clearing will typically include excavators, graders, loaders, tip trucks, water trucks, rollers and utility vehicles.

2 Foundations

Concrete foundations will be constructed under the earth to hold up the new structures.

Every structure will have four foundations drilled, one for each leg. Poles will only have one foundation.

Foundations will take longer to construct where hard rock or other unexpected conditions are present.

This stage involves:

- Holes excavated using an auger or pepper drill
- Reinforcement and concrete poured into the excavation
- Other equipment may include cranes, excavators, vibro-hammers, water truck, concrete agitator trucks and utes
- Earthing will also need to be installed for some footings - this will typically involve a buried earth strap and earth rods installed at varying distances from footings.

3 Tower Assembly and Erecting

Steel towers will be installed onto the footings at each structure location.

Works for this stage may be non-continuous with intervals between delivery, assembly and erecting.

This stage involves:

- Steel towers delivered in pieces by truck to the structure location
- Towers assembled at each location. This involves a two-step process:
 1. Assembly: An assembly crew joins the steel to build the tower sections. This work will usually involve a small crane and supporting utility vehicles.
 2. Erecting: The next work crew follows behind to erect and join the sections to form the complete tower. A larger crane and supporting utility vehicles are generally used.

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Stringing

Once the towers are erected, the electricity wires (conductors) are strung from structure to structure in sections. This project will generally use an aerial stringing slack (stringing) approach.

This stage involves:

- A helicopter will pull a light steel cable called the 'draw wire' out between the structures through pulleys in the tower. At this point the draw wire will lay on the ground between structures
- Once the draw wire is pulled through, it is connected to a winch at one end and a brake at the other (this is called a section). A section is generally about 8km – 9km long
- The winch and brake combination applies tension and allows the draw wire to be lifted into the air
- Once in the air, the heavy conductor wire is connected to the draw wire and pulled through the structures and the air under tension using the brake and winch
- When the conductor is pulled through, another crew secures the conductor to the structures using elevated work platforms.

Where there are areas of high sensitivity for ground disturbance, aerial stringing using a 'tension stringing' approach will be used. Where tension stringing is used, the draw wire will not lay on the ground, but will be drawn at an elevation above the ground and vegetation, and secured to the brakes and winches.

Right: Erecting tower common body.

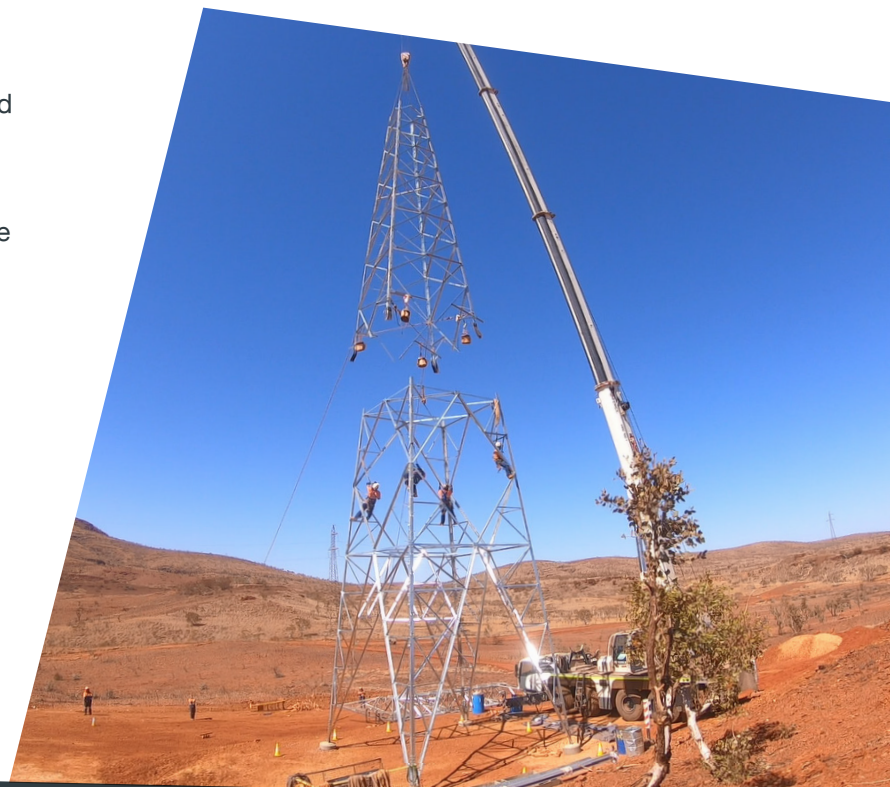
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Rehabilitation

Access to each structure location is required for machinery and equipment.

This stage involves:

- All equipment, vehicles, temporary fencing, signage and waste removed from site
- De-compaction of areas of compaction (through ripping with earthmoving machinery)
- Disturbed land re-contoured to match surrounding ground levels
- Stockpiled topsoil spread on top of de-compacted areas
- In native vegetation, cleared vegetation that was stockpiled during access and clearing is placed over returned topsoil to assist in natural regeneration.



Landholder Enquiries

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