

Fencing near Powerlink transmission lines



Safety is essential every day for our landholders, community and our people.

About this brochure

This brochure outlines the steps required to ensure landholders are able to safely install, operate and maintain fences containing metal components (such as metal wire and/or posts) near our transmission lines. We are committed to working closely with landholders to ensure the steps are clearly understood and implemented correctly to ensure your safety.

General safety information

Fences constructed entirely from wood (e.g. wooden posts with wooden slats) are non-conductive and do not need to follow the **safe working habits** outlined below.

Fences constructed with metal components (such as metal wire or metal posts) near a transmission line can be an electrical safety hazard if not installed correctly. This is due to the transmission line inducing or transferring voltages onto the metal fence. Induced voltages can occur if a metal fence is constructed nearby and parallel to the transmission line. Transferred voltages can also occur if a metal fence is constructed too close to a transmission tower or pole.

Potential electrical hazards can be safely managed by following the below **safe working habits**.

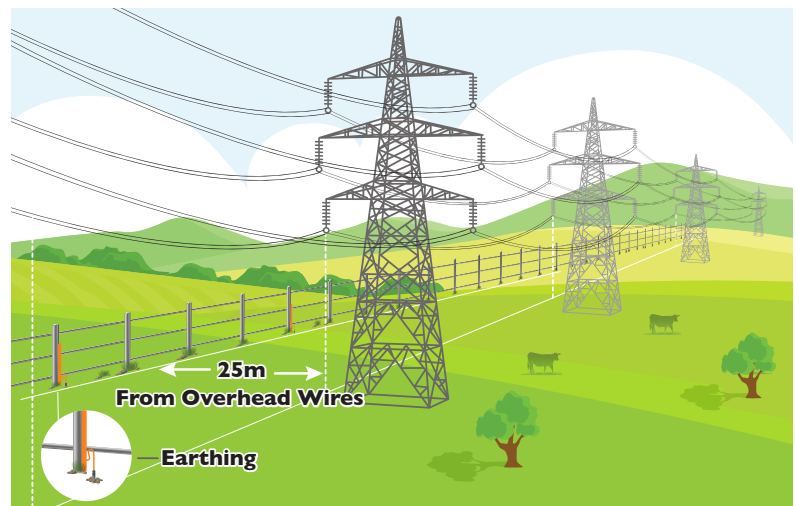
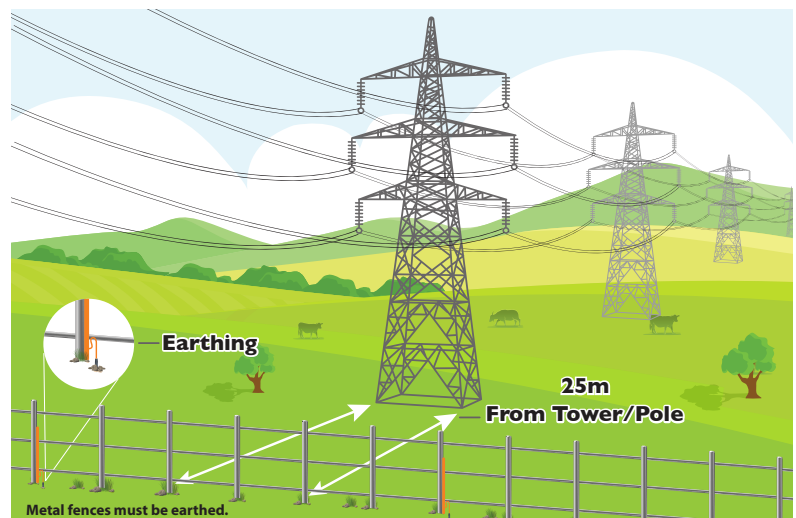
Safe working habits

If possible, remain at least 25 metres away from the transmission line.

Metal fences can cross perpendicular under a transmission line but should be at least 25 metres from a transmission tower or pole. The fence must also be earthed as explained in the next section.

Similarly, metal fences running parallel to a transmission line should also be at least 25 metres away horizontally from the overhead wires. To determine this distance, periodically stand under the overhead wires and measure out 25 metres so you get a consistent offset for the parallel metal fence.

If it is not possible to remain 25 metres away, the parallel fence must be periodically earthed depending on the distance it follows the transmission line, as explained in the next section.





Earth the fence

Metal fences crossing perpendicular under the transmission line must be connected to the ground. This is known as 'earthing' and keeps the metal fence at the same voltage potential as the earth. A minimum of two earths is required.

If the metal fence runs parallel to the transmission line and is **within 25 metres horizontally from the overhead wires**, then it must also be earthed at periodic intervals.

We can provide technical guidance for appropriate earthing intervals for your specific installation requirement.

In some situations where a **very long continuous fence** is required and it is 25 metres or more away from the transmission line, it may still be necessary to earth the fence due to the very long distance of parallel exposure. Powerlink can provide technical advice for these situations.

For a wire fence, ensure the wires are connected together using vertical metal droppers which are then earthed to the ground using the metal stake or rod. **Do not rely on metal fence posts or star pickets to earth the fence.**

If using timber posts, it is still important to connect all the wires together and earth them to the ground.

For a panel fence with metal fence posts (e.g. colourbond), ensure the fence is earthed to the ground by connecting a conductive strap/wire from the fence post to the metal stake or rod in the ground.

Requirements for temporary and permanent electric fences

Once again, remain at least 25 metres away from the transmission line whether crossing perpendicular under the line or running parallel to it.

Install temporary earthing prior to contact being made to the fence for any reason, such as for maintenance or relocation activities.

Ensure the fence is operated in conjunction with a 50 Hz fence filtering system to earth the fence from any potential electrical hazards associated with electric fences and transmission lines. This will permit the energiser to power the fence safely.

Contact Us

Further information about Powerlink and our projects can be downloaded from www.powerlink.com.au

General Enquiries FREECALL 1800 635 369 (during business hours) and ask for Property Services

In case of emergency FREECALL 1800 353 031 (24 hours, 7 days a week)

Email Property@powerlink.com.au

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