

Safety Alert - Working near overhead electric lines

Number 1 – December 2025



The content of this safety alert does not modify, remove or add any legal requirements under the Work Health and Safety Act or Regulations.

This safety alert provides guidance when working near overhead electric lines – this may involve situations such as working on a roof, trimming trees, operating heavy machinery, or in agricultural settings.

Emergency information

Call TasNetworks on 132 004 to isolate the electricity supply before trying to rescue a person receiving an electric shock.

Call emergency services on Triple Zero (000).

Hazards cause harm

Every year in Australia, people are seriously injured or killed while working near overhead power lines.

Death or injury can happen when a person:

- has contact with an energised line, regardless of the level of voltage the line is carrying
- is close to a line conductor, causing electricity to arc and jump – a ‘flashover’.

The hazard

Contact with live (energised) overhead electric lines

Always treat electric lines as energised unless you know that there is written confirmation from TasNetworks that the lines have been de-energised.



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The risks

- Death by electrocution
- Electric shock or other injury caused directly or indirectly by electricity
- Fire
- Unpredictable cable whiplash
- Electrification of other objects like signs, poles, trees or branches
- Explosion

Assess the risks

Gather information and approvals

Find out as much as you can about your worksite and watch out for changes so you can respond quickly to new or different risks. This includes when your worksite is moved.

Contact TasNetworks or the private owner of the electric line as needed.

Check:

- the height, arrangement and visibility of electric lines and supporting structures like poles, towers and stay wires
- for possible sway or sag of electric lines caused by wind or temperature changes
- site conditions, e.g. wind strength and direction, terrain and possibility of unexpected ground surface movement under plant, vehicular traffic, pedestrians or livestock that could interfere with work
- environmental conditions, e.g. storm activity, heavy rain, hail and lightning.

Make sure you know:

- that workers are properly trained and qualified to the level necessary for the work they will be doing
- the location and voltage of electric lines and exposed energised parts and whether they are insulated or bare
- that if the lines have been de-energised, there is written confirmation of that from TasNetworks
- that there is written permission to enter and work inside no-go zones – this will vary depending on the voltage of the lines and the level of authorisation of each person carrying out the work
- the exact height, extension and reach of vehicles, machinery and equipment
- the nature, size and shape of loads to be moved.

Implement controls to manage the risks

Follow the hierarchy of controls

The hierarchy of controls ranks risk controls from the highest level of protection to the lowest. You can find out more about the hierarchy of control and managing risk on Safe Work Australia's website at safeworkaustralia.gov.au.

Some ways of controlling risks are more effective, give more protection and are more reliable than others.

Work through this hierarchy as you manage the risks around working near overhead electric lines. In most cases, a combination of controls will be the best way to minimise risks to the lowest level reasonably practicable.

Eliminate the risks

You can only eliminate the risks by stopping people, plant, equipment and materials from coming close enough to energised electric lines for direct contact or flashover to happen.

Ways to do this include:

- de-energising the electric line for the duration of the work
- isolating and earthing the line (or equivalent for low voltage or rail) so it is not energised
- re-routing the electric line away from the work area
- replacing existing overhead electric lines with underground lines, e.g. cables.

Contact TasNetworks through your energy retailer to discuss de-energising or re-routing the electricity supply. Do this as quickly as possible because it can take some time to arrange.

If you can't eliminate the risk

If you can't eliminate the risks by de-energising the line or the electricity supply, you will need to minimise the risks so far as reasonably practicable.

First, make sure that workers and others always follow safe distance advice from TasNetworks. You can find this advice on the TasNetworks website at tasnetworks.com.au.

Next, consider these options, in the order they appear.

Minimise the risks

Substitute the hazard with a safer alternative	Isolate the hazard from people	Reduce the risks through engineering controls
Use: • alternative plant which cannot enter an unsafe zone • non-conductive tools designed to reduce the possibility of direct contact with the electric line ultrasonic measuring devices instead of mechanical types for measuring heights of overhead lines.	Use: • a non conductive physical barrier to prevent any part of plant or equipment or a person or anything held by a person, or attached to a person entering a no go zone. Note that you may need to isolate the electricity supply while the barrier is installed.	Use controls such as: • limiting movement of plant with mechanical stops • fitting plant with programmable zone limiting devices • mechanically limiting slew speed of a crane to slow using electrically insulated plant and equipment.

Reduce exposure to the hazard using administrative controls

Use controls such as:

- warning signs to indicate the location of overhead electric lines and defined work areas
- tiger tails or other visual indicators to make electric lines and poles visible
- safe work method statements (SWMS) and safe work procedures that include instructions to workers to –
 - use an observer (a ‘spotter’) to keep a close eye on clearance, especially when moving parts of equipment are fully raised or extended
 - take extra care when carrying tall equipment like ladders
 - keep objects like drones well away from electric lines
 - remember that water is a conductor of electricity and ensure that water is kept well away from electric lines and pipes, plant, machinery or other potentially conductive material under electric lines
 - be aware that any object that comes into contact with electric lines could be live, including any metallic objects (e.g. fences) or even a tree branch
 - never lift loads directly underneath or over the top of electric lines
 - never store, stack or keep objects, plant, machinery or equipment beneath electric lines.

Reduce exposure to the hazard using administrative controls

Use PPE such as:

- electrically tested insulating gloves
- rubber soled boots
- safety helmet
- a rubber insulating mat or an equipotential conductive mat to stand on
- dry, fire retardant clothing – especially important in wet or humid conditions.

Find out more

- Safety information for when you're working near electric lines in Tasmania. Go to the TasNetworks website at tasnetworks.com.au.
- General guide for working in the vicinity of overhead and underground electric lines. Go to the Safe Work Australia website at safeworkaustralia.gov.au.
- Information about health and safety in Tasmanian workplaces, including safety alerts like this one. Go to the WorkSafe Tasmania website at worksafe.tas.gov.au.

The purpose of this safety alert

This safety alert was produced by WorkSafe Tasmania and aims to:

- prevent tragic workplace incidents
- raise awareness and understanding of hazards, risks and safe actions
- avoid devastating consequences for workers and their families, friends, communities and workplaces.

WorkSafe Tasmania recommends that the information in this safety alert:

- is incorporated into your organisation's safety procedures
- is shared with all workers who undertake work near overhead electrical wires.