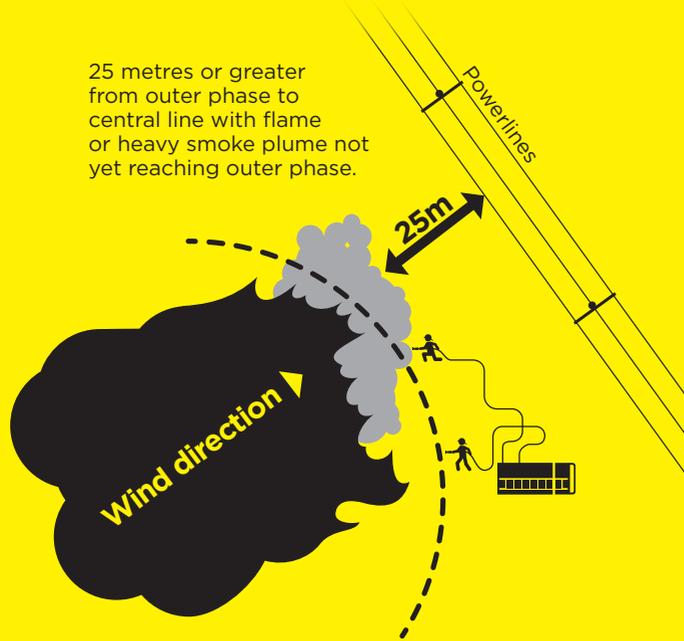


## Firefighting operation where fire and smoke plume are greater than 25 metres from high voltage powerlines

25 metres or greater from outer phase to central line with flame or heavy smoke plume not yet reaching outer phase.



NOTE: Major powerlines are critical infrastructure. They support essential community services and their de-energisation may have significant impact on public safety. Some smaller lines directly service critical sites such as sewerage, water and communication facilities.

It is therefore preferable not to attempt fire control activities near energized lines where possible.

Where fire control activities (hazard reduction) are still considered necessary from the cleared area under powerlines, providing us with early advice will allow an assessment of risks associated with deenergising the powerline.

## Key points

- Be safe. Fires near powerlines can be dangerous. If fire is threatening property or lives, contact Emergency Services immediately by calling 000.
- Report all fires burning underneath or near our powerlines by calling 13 16 70.
- Notify Ergon Energy before undertaking any fire activity near our powerlines by calling 13 74 66 for safety advice.
- Follow the National Guidelines on Electrical Safety for Emergency Personnel (visit [www.saiglobal.com](http://www.saiglobal.com) or call 13 12 42 for a copy).

## Safety risks

Large fires burning adjacent to or under high voltage powerlines have the potential to:

- Create electrical arcs (known as 'flashovers') that can endanger people, animals and objects.
- Damage or destroy the wires, insulators and supports of the powerline.
- Interrupt electricity supply to households and industry.

Our Community Safety Team is available to discuss any questions relating to electrical safety.

**Call 1300 736 349**

**Network customer service 13 74 66**  
7.00am - 6.30pm, Monday to Friday

**Faults only 13 22 96**  
24 hours a day, 7 days a week

**Life-threatening emergencies only**  
**000 (Triple zero) or 13 16 70**  
24 hours a day, 7 days a week

[ergon.com.au](http://ergon.com.au)

Ergon Energy Corporation Limited ABN 50 087 646 062



# Fire and high voltage powerline safety



**NETWORK**



# Our first priority is to ensure the safety of the community and our line workers. Fires burning beneath or near powerlines can endanger people, animals and objects, and have the potential to interrupt electricity supply to customers.

## Report all fires near powerlines

If you see a fire burning underneath or near a powerline and property or lives are at risk, ring Emergency Services immediately by calling 000.

All fires underneath or near a powerline should be reported as soon as possible to Ergon Energy by calling 13 16 70, even if you are unsure what risk they pose.

## Advise of all planned activities involving fire near powerlines

Seek Ergon Energy's advice and approval as early as possible before undertaking any activity involving fire near our powerlines by calling 13 74 66. Early notification can ensure an appropriate response is taken if the fire should cause a fault on the network.

## Flashovers

The combination of dense smoke and hot gases generated by a large fire directly under or near a high voltage powerline can create a conductive path that increases the potential for a 'flashover'.

A flashover is when electricity, especially at higher voltages, jumps across an air gap to create a conductive path. A flashover may occur between powerlines or from powerlines to the ground - this may be seen as a flash or heard as an explosion or loud cracking sound.

Under everyday conditions, the height of powerlines and their separations are designed to be entirely safe. However, a fire burning under or very close to the powerline can increase the distance that an electricity arc can jump.

Flashovers are potentially life threatening to a person standing in the near vicinity of the flashover (much like when lightning strikes the ground near a person). Flashovers can also cause damage to nearby equipment and the powerline, and can cause possible interruptions to power supply to homes and industry.

## Fire behaviour

Fire is unpredictable and can move quickly. Fire behaviour is influenced by a range of factors including:

- The amount, type, moisture content and location of fuel for the fire
- The topography of the area, in particular the steepness of the slope
- The time of day, weather and climatic conditions, including temperature, wind speed and direction.

If you are involved in fire control activities, you should be aware of the hazards and potential consequences of fires near transmission lines so you can reasonably assess the risks.

## Fighting fires near powerlines

Energy Networks' Australia, in consultation with emergency services groups across Australia, has produced National Guidelines on Electrical Safety for Emergency Personnel. Ergon Energy endorses the use of these guidelines

The industry guidelines provide critical information relating specifically to fire control near high voltage powerlines, including the special conditions that apply to the use of water in fire control activities near powerlines

An extract from the National Guidelines on Electrical Safety for Emergency Personnel appears in this document. A full version of the industry guidelines may be purchased from [www.saiglobal.com](http://www.saiglobal.com) or by calling 13 12 42

If you are involved in fire management or control near high voltage powerlines, please familiarise yourself with these guidelines and the recommended control measures.

## Safety advice for fires near powerlines

For your safety, when there is a fire close to a powerline remember:

- Keep personnel, vehicles and attachments at least 25 metres from the powerline
- Electricity, especially at high voltages, can 'jump' across several metres of air gap. This means that direct contact with the high voltage powerline is not required to produce a potentially fatal event
- Smoke can act as a conductor. Fires burning on or near powerline easements can greatly increase the chances of a flashover occurring
- Don't count on rubber tyres on vehicles to stop a flashover from occurring
- Powerlines can sag lower in times of high demand, high temperature and fires, reducing the ground clearance
- Don't stockpile, windrow or heap combustible material under high voltage powerlines
- Exercise caution if using powerline easements to access fire locations, as readymade firebreaks, as a break from which to commence back-burning operations, or as a refuge area in a firestorm.

## Hazards

- Sagging powerlines due to failures or high temperature
- Wood pole structures may fail causing powerlines to fall
- Flashover may occur between powerlines or from powerlines to the ground or structures through burning vegetation (this may be seen as a flash or heard as an explosion).

## Control measures

- Do not directly attack fires in cleared areas beneath powerlines
- Do not spray water on or near powerlines or insulators from the ground or air
- Wait for fire to burn clear of the cleared areas beneath the powerlines before commencing a mop-up operation
- At all times treat the powerline as live until clearance has been given by Ergon Energy personnel ON SITE
- At all times keep personnel and vehicles at a minimum of 25m clear of a headfire, or a flank fire burning under or within 25m of the powerlines (see following diagram illustrating a firefighting operation)
- When working near or under live powerlines, approach no closer than 25m to the fire edge to conduct mop-up of grass fires. Mop-up may include the knockdown of low (less than 2m high) isolated flames/spots/smouldering logs which are not producing a convection column or heavy smoke plume. In such cases:
  - Never direct the hose stream into the powerline
  - Never direct the hose stream into a smoke plume that is near (less than 25m from) or reaching powerlines. Keep stream no higher than a person's head height
  - Never direct the hose stream at a burning bush or tree (more than head height) in a powerline easement
- Bushes or trees burning in powerline easement present a real threat of creating a flashover to earth from powerlines - KEEP AT LEAST 25m CLEAR
- When crossing powerline easement, ensure there is adequate clearance (which will vary between 3m to 8m depending on the voltage of the line) between the highest point of the vehicle (including aerials) and powerlines, avoiding areas with tall vegetation under lines.