



To identify powerline
locations, visit
lookupandlive.com.au
and make a plan to
stay safe when working
near powerlines.



Scan with
smartphone

Call for safety advice



1800 635 369



Queensland
Government



Part of the Energy Queensland Group
13 74 66



13 12 53

1800 353 031

Emergency
numbers

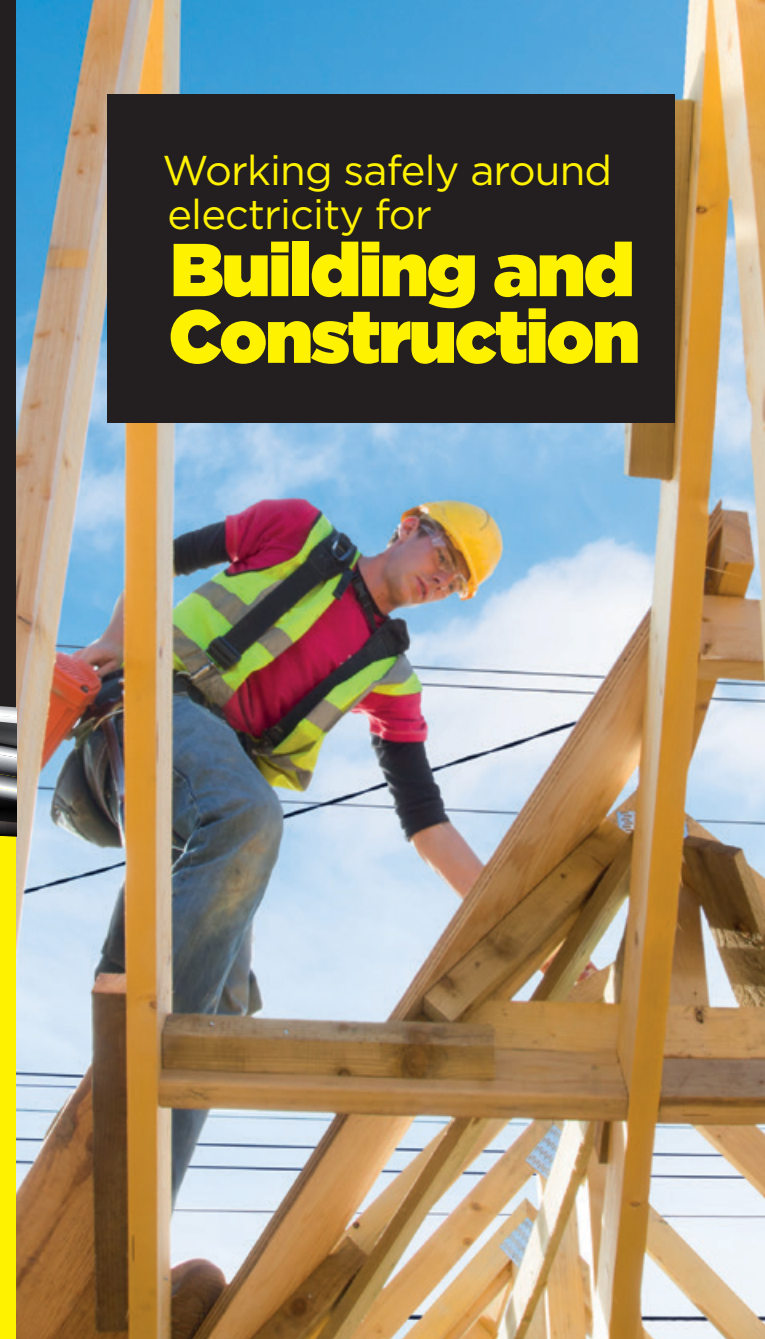
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ergon.com.au | energex.com.au

EGE90508

Working safely around
electricity for
**Building and
Construction**



Queensland
Government



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Working in close proximity to powerlines, above or below the ground, has its hazards. Each year, too many workers make contact with powerlines. This includes contact with poles, wires and pillar boxes by vehicles, the loads they are carrying or their associated plant. Contact can occur when moving machinery and plant from one location to another, operating cranes and machinery or when working on roofs.

Practice safe work habits

- Before starting work, take the time to plan. Visit lookupandlive.com.au - our powerline planning map to identify powerline locations and make a plan to work safe.
- Be aware of Electrical Safety Legislation relating to working around electricity. Obtain a copy of the "Code of Practice for Working Near Exposed Live Parts" and the "Electricity Entity Requirements: Working Near Overhead and Underground Electric Lines". Ensure all workers are familiar with the relevant sections for work being undertaken.
- Ensure workers have been suitably trained and are competent to perform the work being carried out.
- Complete a risk assessment for each structure and piece of machinery to be used and review at the start of each day or if conditions change.
- Ensure all new members of the workgroup, as well as any visitors to the site, are inducted to the Risk Assessment for any potential electrical hazards.
- Consider including a specific check on any risk assessment forms, work instructions or quotation pads to draw workers' attention to electrical safety.
- Ensure safe distances are maintained from all powerlines.
- Assign a Safety Observer to each work team to guide machinery movements or when handling material near overhead powerlines to ensure required clearances are maintained.
- Ensure operators of machinery or delivery vehicles are aware of the height of their vehicle or load and they have been advised of powerline locations.
- Be aware of reduced powerline clearances resulting from damage, often indicated by uneven conductors, excessive sag or slack stays.
- Stay well clear of damaged powerlines and report any damage immediately on triple zero (000).
- Provide ground barriers to warn workers of the presence of overhead powerlines and underground cables.
- Arrange for isolation of electricity supply or the application of visual indicators, such as Tigertails or powerline markers, onto the service and nearby powerlines by the Electrical Entity. (Tigertails provide visual indication of overhead powerlines but DO NOT provide protection against electrical hazards.)
- Be aware activities such as making repairs to roofing or guttering, painting, water blasting and scaffolding can be dangerous if carried out too close to overhead service lines and powerlines.
- Take extra care when handling roofing materials, especially when windy or at heights.
- Ensure any long objects such as ladders and trestle planks are carried horizontally.
- Be aware that under no circumstances must anything be attached to or built around powerlines, poles, pillar boxes or other Electrical Entity equipment.
- Remember that access is essential to keep powerlines and equipment safe and reliable. If you need to build close to overhead lines on a private property they may need to be placed underground or moved.

In construction, demolition or removal work

- Contact us for advice at the planning stage of any construction or demolition activity. If any electricity services need to be upgraded, relocated, disconnected or de-energised, a formal request needs to be submitted well in advance of the work commencing.
- Do not start any work near any Electrical Entity equipment and do not demolish any structure where any Electrical Entity equipment is located, until it has been positively confirmed that this equipment has been made safe.



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Working safely around
electricity for the

Plumbing Industry



Queensland
Government



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Under normal conditions, electricity that enters an electrical installation to power equipment will return to the local substation transformer via the neutral conductor. However, under certain fault conditions, metal water pipes may provide the return electrical path instead of the neutral conductor. Plumbers working on metal water pipes under these conditions are at risk of serious, even fatal, electric shock.

Working on metal water services

Before installing water meters or repairing or replacing metal water services, plumbers and their assistants should plan and use a safe system of work to prevent or minimise the risk of electric shock.

The safe system of work you use should suit the particular situation and should include the following procedures (refer to AS/NZS 3500.1 Plumbing and drainage Part 1: Water services).

Plan

- Plan the job by assessing electrical and other risks and taking suitable steps to stay safe.

Do

- Where possible, switch off the electrical main switch, or switches, at the premises and attach a tag reading 'DANGER DO NOT SWITCH ON'.
- Take additional steps to reduce electrical risk. Your work methods should avoid skin contact with metallic water pipes being worked on e.g. gloves and long trousers.
- Thoroughly clean a section of metal pipe on each side of the length being repaired.
- Attach an insulated bridging conductor—stranded copper cable capable of carrying 70 amperes that has appropriate end clamps with insulated handgrips—to span the length of pipe to be cut.

Check

- Check to ensure the clamps make good electrical contact with the metal pipe.
- Check to ensure the bridging conductor remains undisturbed until the work is finished.
- Where any existing metallic service pipe is to be replaced by non-metallic pipe or fittings, have the electrical installation checked by a licensed electrical contractor and modified if necessary to ensure the electrical earthing system for the premises remains effective.

Act

- Notify the local electricity distributor and the householder immediately if you see anything abnormal such as electric sparks or you feel an electric shock.



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stay safe when working
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Scan with
smartphone

Working safely
around electricity for
**buildings,
structures
and
billboards**

Call for safety advice



1800 635 369



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Government



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EEB08011



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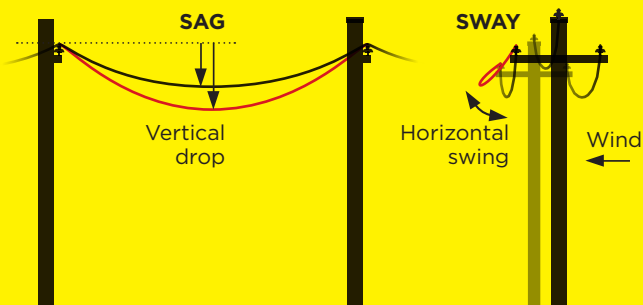
Working in close proximity to powerlines, above or below the ground, has its hazards. It is extremely dangerous and potentially life threatening to allow anything to come in close proximity to the conductors on a powerline.

Ensure you're in the clear

Before starting work, take the time to plan. Visit lookupandlive.com.au - our powerline planning map to identify powerline locations and make a plan to work safe.

When planning and before commencement of work, regardless of whether or not local council approval is required, it is essential to confirm that the proposed construction work e.g. building, structure, sign, crane, scaffold, does not breach the minimum statutory clearance distances that must be maintained from nearby Electricity Entity overhead or underground powerlines. Refer to the Queensland Electrical Safety Regulation 2013, Schedule 4 and 5 for information on statutory clearance distances that must be complied with.

Minimum distances from the closest powerline to the building or other structures must be maintained during strong winds or high operating temperatures. Under these conditions, the powerline can swing or sag considerably towards the building or structure. It is important to allow for these situations at the time of planning so contact with powerlines does not occur.



Contact the Electricity Entity when planning construction work near powerlines or if it appears that powerlines are closer to a building or structure than the minimum statutory clearance. Installation of powerline markers should be considered to highlight powerlines.

Situations where minimum safety clearances should be considered include:

- Knock down and rebuilds, where a small, single story home is replaced by a larger or double story home, or where land is rezoned to allow multi-storey construction, such as apartments or town houses
- Moving the location of a driveway or building driveways close to pillars or poles
- Installing a tall antenna in areas where broadcast reception is poor
- Erecting a flag pole or shade sails
- Any building work near overhead or underground powerlines
- Erecting a cubby house
- Raising the ground level below powerlines
- Erecting metal fences or scaffolding close to poles or powerlines
- Excavating near poles, stay wires or where electricity assets run underground
- Using a crane near overhead powerlines
- Erecting or maintaining signs or billboards
- Erecting sheds
- Erecting carports below points of attachments.

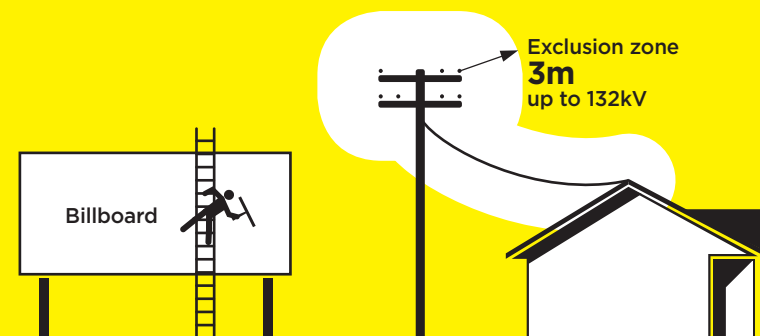
Working safely near powerlines

Contact the Electricity Entity for safety advice on working around electrical parts and ensure exclusion zones are maintained.

The point of attachment is where the electrical service wires attach to a home or building. When work is being carried out near the point of attachment, special care must be taken to avoid contact with these electrical wires, the mounting bracket and the mains box.

Care must be taken when:

- Cleaning leaves from guttering
- Painting gutters, fascias and eaves
- Replacing the roofing or the guttering
- Pruning trees and shrubs (particularly around service wires).

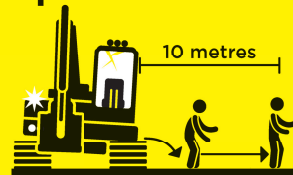


1

STAY
in the excavator

CALL
000

WAIT
for help



2 If there's an immediate danger, like fire, and evacuation is **ABSOLUTELY necessary**, assess your escape route and check for fallen powerlines.

3 Exit the excavator by jumping - make sure to land with both feet together.

4 When jumping, **don't touch the excavator and the ground at the same time.**

5 Once landed with both feet together (careful not to stumble or fall), jump or shuffle with your feet together away from the excavator.

6 Move in this way until you are at least 10 metres away from the excavator. **DO NOT go back.**

What to do if your excavator brings down powerlines



1800 353 031



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EGE181011

Windscreen low tac sticker 100mm x 140mm

Look up and Live

Know your machine

This machinery's **stowed height** is m

This machinery's **extended reach** is m

Call for safety advice

190813

Powerlink
1800 635 369

Queensland
Government

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ENERGY
NETWORK
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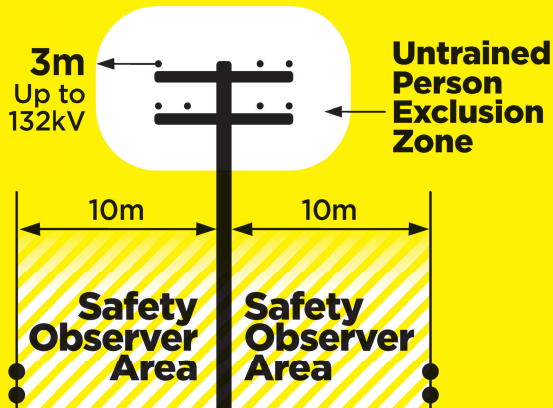
Outside view looking through glass

View from inside windscreen



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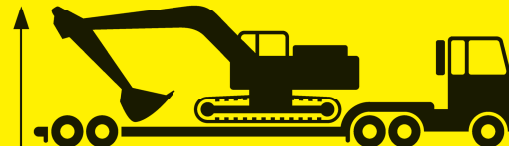
Look up and Live



Call for safety advice

Ergon 13 74 66 | Energex 13 12 53

Permit required if transit height exceeds
4.6m



Place these
handy stickers in
key locations

More industry
specific information

All machinery
operators and other
workers working near
powerlines should

be aware of their safety duties under the
Electrical Safety Act 2002 and The Electrical
Safety Regulation 2013 and adopt safe work
practices in accordance with the Code of Practice
‘Working Near Overhead and Underground
Electric lines’.

Look
up
and
Live

If you are contemplating working or operating
plant near overhead or underground powerlines,
you should obtain a copy of the ‘Electricity
Entity requirements: Working Near Overhead
and Underground Electric Lines’ which is
available at ergon.com.au/lookupandlive or
energex.com.au/lookupandlive

Always take care when
operating around
overhead powerlines.

Working in close proximity to powerlines, above
or below the ground, has its hazards. Every year,
workers die or suffer serious injuries, mostly
because safe work practices around electricity
have not been applied. Not only could contact
with powerlines cause injury or death but costs to
repair the damage could be expensive.

Call for safety advice



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This guide contains valuable information about some of the potential dangers of and how to work safely around, both overhead and underground powerlines, for operators of machinery including excavators, tip trucks, trucks, crop sprayers, harvesters or aircraft and users of scaffolding equipment, irrigators or ladders.

Exclusion zone

An exclusion zone is a safety envelope around an overhead powerline. Exclusion zones keep people, operating plant and vehicles a safe distance from energised overhead powerlines. No part of a worker, operating plant or a vehicle should enter an exclusion zone while the overhead powerline is energised (live).

Exclusion zone measurements depend on the voltage of the powerline, type of work being performed and qualifications of people involved.

Generally, workers and their equipment must maintain exclusion zones around powerlines as follows:

- 3 metres for voltages up to 132kV
- 6 metres for voltages up to 330kV

If the work that you and your staff are planning has the potential to encroach into powerline exclusion zones or if you are unsure, contact us for safety advice before starting the job.

These exclusion zones can be reduced if the worker has been trained and approved as an Authorised Person. Contact us for information on how to become an Authorised Person.

Safety Observer Zone

A Safety Observer Zone is the area where machinery or equipment is operating where any part of the machinery or equipment COULD enter the exclusion zone. A trained safety observer MUST be used if the equipment can reach the exclusion zone. Encroachment into the exclusion zone is strictly forbidden.

To ensure the equipment does not come within an unsafe distance, we recommend that a Safety Observer Area of 10 metres be delineated either side of overhead powerlines as per the diagram below. A Safety Observer SHOULD be used when machinery or equipment is operating in the Safety Observer Area.

Safety Observer

A Safety Observer or spotter is a person who:

- observes the operating plant; and
- advises the plant operator if it is likely that the operating plant will enter the exclusion zone for an overhead powerline.

Safety Observers undergo specific training and must be competent to perform the role in observing, warning and communicating effectively with the plant operator. Contact us for information on how to become a qualified Safety Observer.



What to do if contact with powerlines occurs

What happens if overhead or underground powerlines are contacted

- The machinery or vehicle will become 'live' at the same voltage as the powerlines contacted and electricity will attempt to pass through the vehicle to the ground.
- Anything in contact with the powerlines will also become 'live', such as fences and trees.
- A potentially dangerous electrical field will be created around anything in contact with the powerline. This field extends for approximately 10 metres around these items.

What should you do if contact occurs

- Try not to panic, remain calm and stay in the vehicle until the power has been isolated and the powerlines removed. Don't risk being electrocuted by attempting to leave the vehicle before power is disconnected.
- Advise anyone near the incident site to stay a minimum of 10 metres from the vehicle and anything else in contact with the powerlines.
- Treat all powerlines as if they are 'live'.
- Call 000 immediately to report powerlines down and a life threatening situation.



We recommend that operators of machinery practise this jump / shuffle technique on a regular basis.

What if the person in the vehicle needs to be evacuated

An emergency evacuation is extremely dangerous and should only be attempted as a last resort, such as if the vehicle is on fire. Remember never approach the vehicle to assist in an evacuation and always treat all powerlines as if they are 'live'.

Tyres can explode

When a vehicle contacts overhead powerlines a massive electrical current flows through the vehicle and its tyres to earth. This can cause the tyres to explode on contact or to start burning on the inside.

Tyres burning on the inside creates a potential hazard where the build up of gases and heat can cause the tyre to explode at a later time, even 24 hours after the incident. Flying debris from the tyres exploding could potentially injure any persons in close proximity to the vehicle.

Ensure that the vehicle is isolated with a 300m exclusion zone for a minimum of 24 hours. After this, have the vehicle thoroughly inspected for tyre and mechanical damage.

