



Electricity and Scaffolding

What are the risks?

Contact with energised overhead powerlines while erecting, dismantling or working from scaffolding can cause death, electric shock or other injury to plant operators and workers. This can be caused directly or indirectly by electricity – a close approach to the powerline may allow a 'flashover' to occur. The risk of flashover increases as the line voltage increases.

What should I do before starting work?

- Complete a risk assessment to identify and implement appropriate control measures to prevent any hazards or hazardous work practices and procedures which may have the potential to harm the health or safety of a person.
- Know the location of powerlines on your worksite and their proximity to your work.
- Contact Ausgrid and ensure warning covers such as tiger tails are installed over powerlines for the full length of scaffolding plus a minimum of five metres beyond each end. Remember tiger tails provide visual indication of overhead powerlines but do not provide protection or insulation from electrical hazards.
- If possible, arrange for isolation of electricity supply by Ausgrid.
- Install signage and hording on scaffolding to protect workers or materials from coming into contact with overhead powerlines.

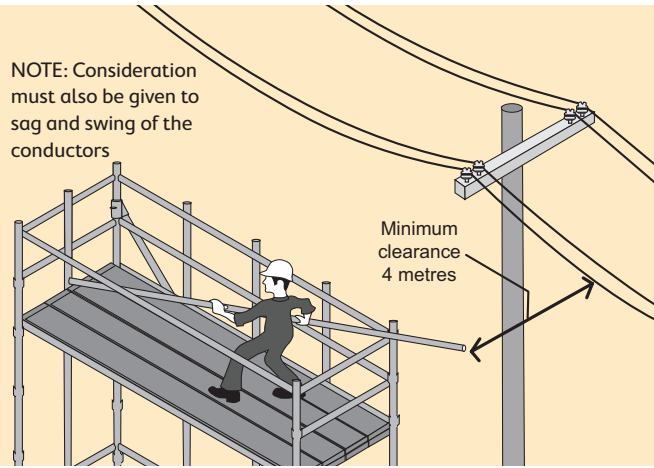
When assessing the risks consider:

- the location, height, arrangement and visibility of overhead powerlines and supporting structures;
- the voltage of powerlines and exposed energised parts and whether they are insulated or bare;

- possible sway or sag of the powerlines;
- the scaffold's dimensions and operating characteristics including inherent stability;
- conductivity if the scaffolds are earthed;
- the minimum clearance distance from the closest part of the scaffold or plant being used to the powerlines;
- erecting and dismantling scaffolding;
- the type of work activities required and the frequency of work tasks;
- qualifications, competency, skill and experience of people doing the work; and
- safe work practices and procedures e.g. a safety observer and 'permit to work'.

Safe work practices

- Ensure the required minimum approach distances are maintained. This is the amount of space required to be kept between machinery and anything held by a person and the powerlines in order to prevent electricity arcing to you or the machinery.
- Where appropriate, provide ground barriers to warn workers of the presence of overhead powerlines.
- Assign a competent safety observer to each work team when moving, erecting or dismantling scaffolding near overhead powerlines to warn the person/operator of unsafe conditions and ensure that minimum potentially safety approach distances are maintained.
- Ensure minimum safe approach distances are maintained by allowing for powerline movement from strong winds when positioning scaffold.



Minimum approach distances

When planning scaffolding work you should use the minimum approach distances listed in the table below initially and then consider other factors that may require a greater approach distance including:

- the proximity of overhead electricity lines
- the proximity and operating radius of vehicles, cranes and other moving plant
- environmental conditions e.g. storm activity, wind strength and direction, heavy rain, ice, hail and lightning, and
- entry and exit for workers, materials and plant.

Minimum approach distances when working near powerlines

Line voltage (and span in metres)	Minimum approach distance (metres)
Not exceeding 66kV (maximum span 125m)	4.0
Exceeding 66kV (maximum span 125m)	5.0
Any voltage (span greater than 125m but less than 250m)	6.0
Any voltage (span greater than 250m but less than 500m)	8.0
Any voltage (span exceeding 500m)	8.0 Refer to Ausgrid

Important Safety Tips

- You can still be injured without directly contacting an overhead powerline, as electricity can arc across open spaces – so keep your distance!
- Carefully monitor weather conditions – powerlines can sway in winds, sag as temperature increases and are difficult to see at dawn and dusk
- Always treat all powerlines as alive even though they may appear to be dead.
- Tiger tails do not provide protection against mechanical interference or electrical hazards. Using tiger tails does not allow workers to enter the 4 metre approach distance.
- Check out the **SafeWork NSW Code of Practice 'Work near overhead powerlines'** chapter 6, Work involving scaffolding near overhead powerlines, can be viewed at www.safework.nsw.gov.au or you can purchase a copy by contacting SafeWork NSW on **13 10 50**.

For more information

Contact Ausgrid at electricalsafety@ausgrid.com.au to discuss electrical safety or organise an Electrical Awareness Session for your worksite.