WORK NEAR OVERHEAD POWERLINES

What do you need to know about using machinery near powerlines?

What you need to know prior to starting work near overhead powerlines

It is essential that you know the height and voltage of the overhead powerlines in your work area and the height of your machinery in both the operating and transport positions. If you are unsure of the height and voltage of powerlines you should contact Essential Energy for more information.

Do not attempt to directly measure the height of overhead powerlines as it may cause serious injury or be potentially fatal. Be aware that powerline heights can vary, therefore a visual inspection for changes in powerlines should be carried out before commencing any activity or passing near/under them.

What kind of machinery is at risk of contacting overhead powerlines?

Plant and Equipment	Some key risk areas of contact with powerlines, poles or guys
Tractors	Exhaust, aerial & pulling implements
Implements	Wings fold at transport mode & width
Harvesters	Aerial, Exhaust, unloading chute
Tippers	Exhaust, aerial and raising bin
Stock Crates	Loading and unloading, walking along top
Cotton Module makers	Tramper ram left extended & operating and dumping activities
Irrigators	Raising or standing pipes vertically, water jet, travelling underneath
Sprayers	Booms fold at transport mode & width
Excavators /Backhoes	Operating, relocating, digging & cleaning dams - arm, knuckle bucket
Dozer	Pushing & stacking timber Raising roadways reduces clearances
Augers/Grain equipment	Storage bin position & moving augers
Crane	High boom, swaying rope & loads

Table 1 - Farm plant at risk of contacting powerlines

What are the minimum safe approach distances when driving under powerlines?

An 'approach distance' 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.

The minimum distance required to safely drive vehicles under powerlines includes the load, exhaust pipe and attachments such as rotating/flashing lights or radio aerials.

The following table provides minimum safe approach distances for fixed height vehicles. Please refer to Table 3 for information on operating machinery near powerlines.

Nominal phase to phase a.c. voltage (volts)	Minimum approach distance (metres)
Low voltage conductors up to 1,000 (Usual supply from transformers to houses, sheds and pumps)	0.6
Above LV, up to and including 33,000 (Usual supply to rural transformers on single poles with crossarms)	0.9
Above 33,000 up to and including 132,000 (Usually two poles or single poles without crossarms)	2.1
Above 132,000 up to and including 220,000 (usually steel towers)	2.9
330,000 (steel towers)	3.4
500,000 (big steel towers)	4.4

Table 2 - Minimum approach distances required when driving under powerlines

Be safe, because they need you

When assessing approach distances for a vehicle driven under overhead powerlines remember:

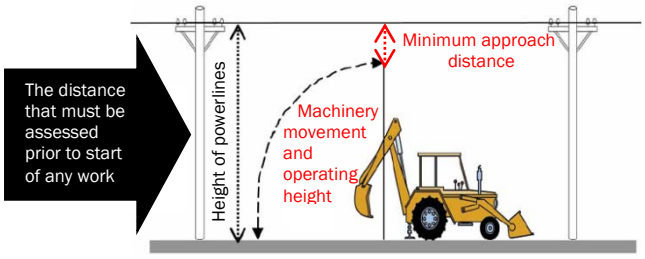
- Machinery higher than 4.6 metres is at high risk of contacting overhead powerlines and should be closely monitored to ensure required minimum approach distances are maintained
- If safe approach distances can't be achieved, contact Essential Energy on **13 20 80** for advice.

What are the minimum safe approach distances when working near powerlines?

Workers and their equipment should not approach overhead powerlines any closer than the following:

Powerlines with voltages up to 132,000 volts	e.g. low voltage and high voltage distribution and subtransmission lines, usually on poles	3m
Between 132,000 and 330,000 volts	e.g. subtransmission and transmission lines on either poles or towers	6m
More than 330,000 volts	e.g. transmission lines usually on towers	8m

Table 3 – Minimum approach distances when working near powerlines



What can you do to stay safe when working near overhead powerlines?

- Provide workers with accurate, up-to-date maps/diagrams showing the location of powerlines on the property
- Identify safe travel paths to help eliminate the possibility of contact with powerlines
- Ensure operators are aware of the height and reach of their machinery in both stowed and working positions

- Assign a competent safety observer to each work team to guide machinery movements near overhead powerlines, to warn the operator of any unsafe conditions and ensure that minimum safe approach distances are maintained
- Always lower all machinery to the transport position when relocating
- Work away from powerlines not towards
- Ensure maintenance of machinery and storage activities are carried out well away from powerlines
- Where possible, provide ground barriers
- Contact Essential Energy about marking powerlines and power poles on your property for improved visibility.

For more information

Essential Energy's Public Safety team is available to facilitate Electrical Awareness sessions and discuss any questions relating to electrical safety.

For more information on electrical safety please call Essential Energy:

General enquiries **13 23 91**

Power outages **13 20 80**

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or visit essentialenergy.com.au/safety

Essential Energy recommends you familiarise yourself with the latest SafeWork NSW Code of Practice 'Work near Overhead Powerlines' which can be viewed at: www.safework.nsw.gov.au or you can purchase a copy of the Code of Practice by contacting SafeWork NSW on 13 10 50.

SAFETY FIRST:

- You can still be injured without directly contacting an overhead powerline as electricity can arc across open spaces – so keep your distance!
- Be aware that the apparent height of powerlines will vary depending upon the angle which they are viewed.
- Always treat all powerlines as live even though they may appear to be dead.