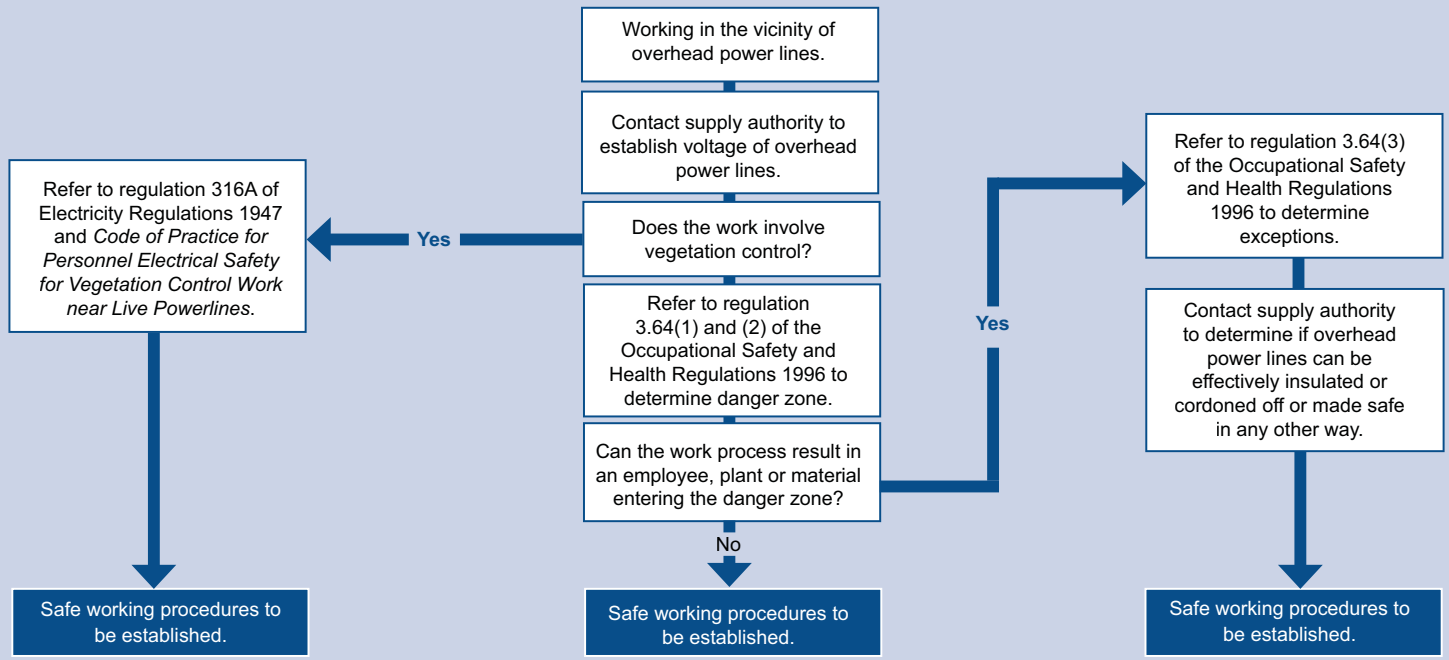


## PROCESS FOR WORKING IN THE VICINITY OF OVERHEAD POWER LINES



Guidelines for work in the vicinity of

# Overhead power lines



Contact with live overhead power lines kills people and causes serious injuries every year.

Contact:

**Customer Contact Centre Western Power**  
**13 10 87**  
 8:30am - 5:00pm Monday to Friday  
 Email: [customer.contact.centre@westernpower.com.au](mailto:customer.contact.centre@westernpower.com.au)

**EnergySafety**  
 303 Sevenoaks Street Cannington 6107  
 Tel: (08) 9422 5286 Fax: (08) 9422 5244  
 Internet: [www.energysafety.wa.gov.au](http://www.energysafety.wa.gov.au)  
 Email: [energysafety@docep.wa.gov.au](mailto:energysafety@docep.wa.gov.au)

 **Department of Consumer and Employment Protection**  
 Government of Western Australia

**WorkSafe**  
 WESTCENTRE 1260 Hay Street West Perth 6005  
 PO Box 294 West Perth 6872  
 Tel: (08) 9327 8777 Fax: (08) 9321 8973  
 TTY: (08) 9327 8838  
 Internet: [www.worksafe.wa.gov.au](http://www.worksafe.wa.gov.au)  
 Email: [safety@docep.wa.gov.au](mailto:safety@docep.wa.gov.au)



 **Department of Consumer and Employment Protection**  
 Government of Western Australia



**NOTE:** Where the electricity network is not operated by Western Power then the appropriate supply authority or network operator should be contacted.

# LEGISLATION - regulation 3.64

## Restrictions on working in vicinity of overhead power lines

(1) In this regulation -

**danger zone** means anywhere that:

- is within 0.5 metres of a live insulated overhead power line or aerial bundled conductor line of a voltage of not more than 1,000 volts;
- is within 1.0 metre of a live uninsulated overhead power line of a voltage of not more than 1,000 volts;
- is within 3.0 metres of a live overhead power line, whether insulated or not, of a voltage exceeding 1,000 volts but not more than 33,000 volts; or
- is within 6.0 metres of a live overhead power line, whether insulated or not, of a voltage exceeding 33,000 volts.

**overhead power line** means an overhead line for the transmission of electrical energy.

- (2) Subject to subregulation (3), without limiting clause 2.5.7 of AS/NZS 3012, a person who, at a workplace, is an employer, the main contractor, a self employed person or a person having control of the workplace must ensure that an employee or any plant or material used or controlled by an employee does not enter the danger zone of an overhead power line.

**Penalty: \$25,000**

- (3) A person does not commit an offence under subregulation (2) if, proof of which is on the person:

- the overhead power line has been adequately insulated and effectively cordoned off to protect the safety of persons or otherwise made safe, as the case requires; or
- the employee is authorised to carry out electrical work under the *Electricity Act 1945*.

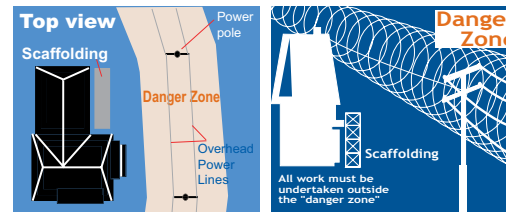
This guide is aimed at those in control and those performing any work under or near to overhead power lines.

It is particularly relevant where plant or equipment such as scaffold components, roofing or other building materials, cranes or irrigation equipment are operated or moved under or in the vicinity of overhead power lines.

### CLEARANCE FOR ERECTING SCAFFOLDING NEAR OVERHEAD POWER LINES

**Example:**

If a scaffolder was erecting 6m long scaffold tubes in the vicinity of a 1,000 volt overhead power line, what safe working distance is needed?



**Answer:**

Clearance from 1,000 volt live insulated powerline would be  $0.5\text{m} + 6.0\text{m} = 6.5\text{m}$

**Explanation:**

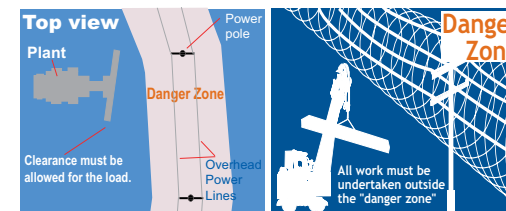
Any work where the tube could come into contact with the line would need to be six metres plus the danger zone distance relevant to the voltage and nature of insulation, in order that the scaffold tube **cannot enter** the danger zone.

### CLEARANCE FOR PLANT WHILE IN OPERATING MODE

**Example:**

A crane needs to be positioned so that no part of the load being lifted or any component of the plant can enter the "danger zone".

The crane is operating in the vicinity of a 22,000 volt overhead powerline with a centre line of hook to extremity of load of 6 metres. What safe working distance is needed?



**Answer:**

Clearance from 22,000 volt live power line would be  $3.0\text{m} + 6.0\text{m} = 9.0\text{m}$

**Explanation:**

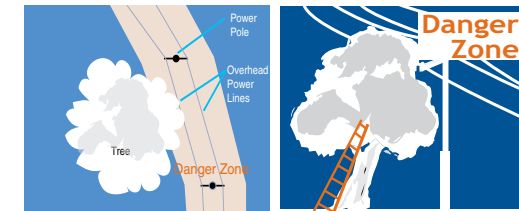
The crane lifting point would need to be 6 metres plus the "danger zone" distance relevant to the voltage and nature of insulation, in order that the crane and load **cannot enter** the danger zone.

### CLEARANCE FOR PRUNING TREE BRANCHES NEAR POWER LINES

**Example:**

A tree needs to be pruned so that no branches can interfere with 1000 volt overhead power lines. Some branches are within centimetres of touching the powerlines. In order to remove this vegetation, the operator will need to move himself and his equipment within the danger zone distance relevant to the voltage and nature of insulation.

What safe working distance is needed?



**Answer:**

No safe working distance from the danger zone is possible. So what should they do?

**Explanation:**

If any vegetation or worker or any tool, equipment or vehicle used by that worker is likely to come within the danger zone of live overhead power lines, those workers must:

- be properly trained; and
- comply with the electrical safety requirements of regulation 316A of the Electricity Regulations 1947 and work in accordance with the requirements of the *Code of Practice for Personnel Electrical Safety for Vegetation Control Work near Live Power Lines* or an alternative code approved by the Director of EnergySafety.

Additional information can be obtained from EnergySafety's booklet *Worker safety when cutting trees* - available from DOCEP's website.