

ELECTRICAL SAFETY

FOR BUILDING AND CONSTRUCTION WORKERS

WORKPLACE FACT SHEET

KNOW THE DANGERS

Employees and contractors in the building and construction industry may run the risk of receiving an electric shock and causing substantial damage to plant and equipment when operating plant near overhead power lines or when excavating. This fact sheet has been developed to help you understand why you may be at risk and what you can do to work safely.

THINGS YOU SHOULD DO BEFORE STARTING WORK

- Complete a risk assessment. This should identify hazards (including work practices and procedures) and help you implement appropriate control measures.
- Find out the location of underground and overhead power lines and their proximity to your work activities and transit routes before commencing digging or other activities by phoning **131 081**.
- Know the location of underground and overhead power lines and their proximity to your work activities and transit routes before commencing digging or other activities.
- Dial **1100** or visit **www.1100.com.au** when planning underground work.
- Visually inspect points of attachment, at both ends, before commencing work as gutters and metal roofs may become "alive" due to deteriorating insulation on electrical wiring.
- Use a safety switch to reduce the risk of shock from portable tools.
- Before commencing work, install eye level visual markers in any area where overhead power lines are identified.
- Carefully monitor weather conditions – power lines can sway in the wind, sag as temperatures increase and are difficult to see at dawn and dusk.
- Ensure operators are aware of the height and reach of their machinery in their travel, stowed and working positions to ensure that minimum approach distances to power lines are maintained. For more information refer to *Work Near Overhead Power Lines Code of Practice 2006*, WorkCover NSW.
- Determine electricity asset safety clearances and whether an isolation needs to occur by referring to *Where to draw the line on safety clearances from electricity assets*, available at www.endeavourenergy.com.au
- Ask the occupant if they have experienced any minor electrical shocks from plumbing or appliances.

Call 131 081 and put safety first.
www.endeavourenergy.com.au

BEFORE YOU DIG

- Apply for Dial Before You Dig plans for each location where you intend to dig.
- Use cable location services and technologies such as Global Positioning Systems (GPS) and Ground Penetrating Radar (GPR) to accurately identify the location of underground utilities.
- Pothole once you reach the applicable approach distance – for more information on approach distances for underground assets refer to *Work Near Underground Assets Guide 2007*, WorkCover NSW.

SAFE WORK HABITS

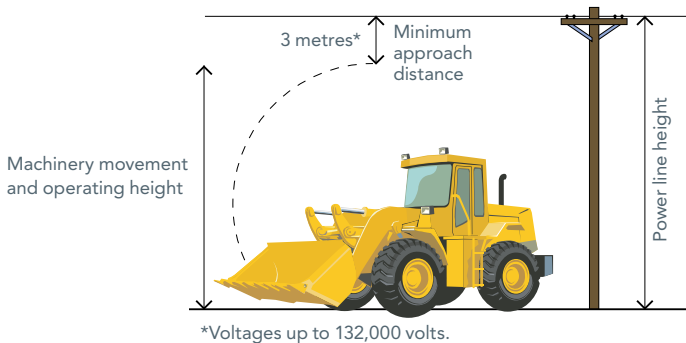
- Look up and locate overhead power lines and maintain at least the minimum approach distance from them.

Minimum safe approach distances when working near power lines

Workers and their equipment should not approach overhead power lines any closer than the following, when machinery is being operated:

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

The distance that must be assessed prior to work



- Remember that WorkCover requires a minimum approach distance of at least three metres from overhead power lines (up to 132,000 volts).
- Exercise extreme caution when working near the point of attachment of the electrical service line to the house/building.
- Look for cables and the signs of underground assets whenever digging, such as changes in grass, depressions or mounds and pipe work.
- Look out for electrical arcs. If identified, do not commence work and contact Endeavour Energy immediately on **131 003**.
- To eliminate the possibility of making contact with power lines on a job site, plan and communicate safe traffic paths by providing diagrams of plant and vehicle travel paths away from overhead power lines.
- Assign a spotter to each operator of high machinery and excavators to guide movements near overhead power lines and underground cables and ensure that minimum approach distances are maintained.

- Before every relocation, lower all machinery into the transport position.
- Use proximity sensor technologies on plant while you dig.

PERMIT TO WORK SYSTEMS

Using a permit to work (PTW) system can be an effective way to be sure preventative measures have been taken before any digging commences. It acts as a checklist that can only enable digging work to commence (usually with supervisor sign off) once all preventative actions have been taken *first*.

A typical permit to work checklist should ask/specify the following:

- 01 Has Dial Before You Dig been undertaken?
- 02 Have cable location services/technologies been used and their results compared with the DBYD plans?
- 03 Have the plans been marked up to reflect any new information/changes?
- 04 Has the safest plant suitable for the job been selected and ordered?
- 05 Has a spotter been allocated to this job to observe hand, mechanical or powered digging?
- 06 Is potholing included in the safe work procedure?
- 07 Has the job been assessed to use non-destructive digging?
- 08 Have overhead power lines been identified as a risk? If so, has this risk been managed as low as reasonably practicable?
- 09 Have all persons who may face/are affected by the risk of hitting underground utilities been consulted/made aware of the safe work procedures?

SAFETY EXCELLENCE

IN EMERGENCIES CALL 131 003

24 hours a day, 7 days a week

If you have any questions about what you should do to stay safe please call 131 081 or visit us at www.endeavourenergy.com.au