

MOBILE PLANT OPERATING NEAR OVERHEAD POWER LINES

The purpose of this alert is to remind businesses, industry and workers of the dangers arising when operating mobile plant near energised overhead power lines.

BACKGROUND

SafeWork NSW and NSW electricity supply authorities continue to receive notifications of incidents where mobile plant have come into contact with energised overhead power lines. Since July 2011 there have been a total of 55 incidents reported where cranes, machinery and other mobile plant have come into contact with power lines. Such incidents include the following:

- A mobile crane operator struck a 11kV power line when unloading a truck.
- A truck driver raised a tipper and struck a 11kV power line.
- An excavator boom struck a 11kV power line.
- A low loader struck low voltage overhead power lines.
- An operator raised a drill rig into high voltage transmission lines.
- A wheat harvester struck power lines, which resulted in a fire that engulfed the machine.
- A cement truck reversed into an overhead service line at a residential property.

CONTRIBUTING FACTORS

Each of the incidents described above is the result of a failure to identify the hazard of overhead power lines and a failure to implement a safe system of work, including the maintenance of safe approach distances from the energised power lines.

ACTION REQUIRED

Contact with overhead power lines is a serious risk that can result in electrocution, electric shock or burns. Other risks include fires and explosions that may immobilise mobile plant involved in work.

Persons conducting a business or undertaking near energised overhead power lines and associated electrical apparatus should do the following before commencing work:

- Clearly identify the height and voltage of high and low voltage power lines, including overhead service lines to buildings.
- Conduct a risk assessment of the proposed work.
- If necessary, consult with the relevant electricity supply authority about the work and comply with any special conditions imposed by them.

- Eliminate the risk by arranging for the electricity supply authority to isolate the electricity supply for the duration of the work.
- If the risk cannot be eliminated, separate the electrical hazard from the mobile plant and the workers by ensuring the following approach distances are maintained:
 - Up to 132,000 volts – 3 metres
 - Between 132,000 volts and 330,000 volts – 6 metres
 - Above 330,000 volts – 8 metres.

Note: when applying the above approach distances, it is important to take into account the 'sag and swing' of the powerlines, the movement of the mobile plant and the strength of the wind, as well as possible operator error or equipment malfunction.

- Ensure a safety observer is used whenever a mobile plant is in motion and is likely to come closer than the above approach distances.
- Ensure an effective communication system is in place for the workers performing the work.
- Remember the safe work procedure when working near overhead power lines – **LOOK UP AND LIVE.**

EMERGENCY RESPONSE TO A POWER LINE INCIDENT

Should contact be made with a live overhead power line and a vehicle, the following actions must be taken.

- Try not to panic. Remain calm and stay in the vehicle. Don't risk being electrocuted by attempting to leave the vehicle.
- Advise anyone near the incident site to stay at least eight metres away from the vehicle or any fallen power lines.
- Contact the local electricity supply authority to switch the power off and call the emergency services – 000 – to report the life threatening situation.
- If you're not going to create another hazard to yourself or others, make an attempt to break the vehicle's contact with the power line.
- If you must leave the vehicle because of a fire or other life threatening situation, jump clear to ensure that you don't have contact with the vehicle and the ground at the same time. When you jump clear, ensure that you land with your feet together and then continue to jump or shuffle with your feet together until you are at least eight metres clear of the vehicle, power lines or anything in contact with the vehicle or power lines.
- Untrained or unequipped persons should not attempt to rescue a person who has received an electric shock. Secondary deaths often occur when those who are trying to help such people become electrocuted themselves. If the vehicle is immobilised, ensure that the power supply has been switched off and the incident site has been made safe before giving assistance.

Refer to the *Work near overhead power lines: Code of practice* (catalogue no. SW08820) for further information on the steps that need to be followed in the event of an emergency following contact with live overhead power lines.

FURTHER INFORMATION

The WHS Act requires a person conducting a business or undertaking to ensure, so far as is reasonably practicable, that safe systems of work are provided and maintained and that all workers are provided with the necessary information, training, instruction and supervision.

Clause 166 of the WHS Regulation places specific obligations on duty holders to ensure, so far as is reasonably practicable, that no person, plant or thing at the workplace comes within an unsafe distance of an overhead power line.

For more information, call 13 10 50 or visit safework.nsw.gov.au

Work near overhead power lines: Code of practice (catalogue no. SW08820) is available at safework.nsw.gov.au

NSW Electricity Supply Authorities – emergency contact numbers:

Ausgrid 13 13 88

Endeavour Energy 13 10 03

Essential Energy 13 20 80.

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