

Managing Electrical Risks in the Workplace

Code of Practice Fact Sheet



Government
of South Australia
SafeWork SA

The *Code of Practice – Managing Electrical Risks in the Workplace* is available on the SafeWork SA website at safework.sa.gov.au. This fact sheet provides a summary of that Code.

The Code provides guidance on how to meet your duties as a person conducting the business or undertaking (PCBU) to ensure that:

- workers and other persons are not exposed to electrical risks, as far as is reasonably practicable
- Residual Current Devices (RCDs) are used in specified high risk environments
- electrical installation work is carried out by qualified electricians and that testing and compliance requirements are met.

Risk management process

Electric shock, arcing, explosion, fire and release of toxic gases and contaminants are among the hazards associated with electrical installations and electrical work.

Using the following four step risk management process will allow a PCBU to consider risks associated with managing electrical risks in the workplace:

1. Identify the problem – this is known as hazard identification.
2. Determine the level of risk to workers and others as a result of the problem – this is known as risk assessment.
3. Decide what needs to be done about the problem – this is known as risk control.
4. Review the risk controls – to make sure they are working as planned.

Refer to Chapter 2 of the Code for more information to assist with each of these steps.

The PCBU must share information and consult on decisions where a worker is likely to be directly affected by a work health and safety matter.

Managing electrical equipment and installations

A business needs to ensure that:

- power circuits are protected by appropriately rated fuses or circuit breakers
- electrical leads are not arranged so that they are easily damaged, run across floors or doorways, or over sharp edges
- only leads and tools designed for wet or damp conditions are used in those conditions
- circuits where portable equipment may be connected are protected by RCDs
- if any current protective device (RCD or circuit breaker) is triggered, the system is not re-energised until the reason has been identified by a competent person
- equipment identified as unsafe is disconnected or isolated and labelled as unsafe and not reconnected until it is repaired and tested as being safe
- regular visual inspections and testing of electrical equipment, including RCDs, occurs. The nature and frequency of inspection and testing will vary depending on the electrical risks.

Note: not all electrical items need to be inspected and tested. Refer to pages 13-21 of the Code for more information on what needs to be tested.

Managing the risks

Businesses or undertakings that carry out electrical work must also comply with the prohibition on permitting energised work on electrical equipment unless one of the limited exemptions discussed in Chapter 7.1 on page 34 of the Code applies.

Electrical work includes:

- connecting or disconnecting electricity supply wiring to electrical equipment or installations
- removing, testing, repairing or maintaining electrical equipment or installations.

Refer to Chapter 4.1 on pages 23-24 of the Code for more information.

Electrical work must only be carried out by a competent and trained licensed electrician. A risk assessment should be completed prior to initiation of electrical work.

As a general principle, electrical work should not be carried out on energised equipment or cables. Equipment should be tested to determine that it is not energised before work starts.

The safe work principle *TEST FOR 'DEAD' BEFORE YOU TOUCH* must be applied at all times.

Working de-energised on low voltage electrical equipment or circuits requires the electrical equipment or circuits to be effectively isolated from all relevant sources of electricity supply. This may be done using opening switches, removing fuses or links, opening circuit breakers or removing circuit connections.

Refer to page 29 of the Code for a table summary of the standard steps for isolation of low voltage equipment and circuits. Additional guidance is provided on pages 29-33 of the Code.

These steps include testing to confirm effective isolation has been achieved and procedures to prevent inadvertent re-energising while work is being undertaken.

Energised electrical work

Energised electrical work must only be undertaken where it is absolutely necessary, and must not be carried out merely because it is convenient.

Work on energised equipment requires systematic risk assessment, planning and preparation. It should only be undertaken by an electrician with the necessary competency, training, tools, testing equipment and personal protective equipment (PPE) suitable for the work.

Energised work should only be carried out according to a safe work method statement prepared after consultation with relevant workers and Health and Safety Representatives, and with a safety observer present. The person acting as safety observer must be competent to implement identified emergency control measures, rescue and if necessary resuscitate the electrical worker. Safety observers must not have other duties assigned to them while they are observing.

Safety barriers and signs should be considered to protect electrical workers from inadvertent contact with energised parts and warn and direct other persons away from any area where energised work is being undertaken.

Refer to pages 34-44 of the Code for detailed safety recommendations on undertaking energised electrical work or work near energised electrical parts.

Electrical tools and equipment

Tools, instruments, equipment and PPE must be selected to be suitable for purpose and must be inspected regularly and maintained according to manufacturer's instructions. Workers conducting inspection, testing and maintenance must be suitably trained and competent to undertake those tasks.

Consideration should be given to eliminating the use of metallic or conductive ladders.

Equipment used for detecting an energised source should be trialled, immediately before and after the testing, to ensure that it is functioning correctly.

safe, fair, productive working lives

1300 365 255
safework.sa.gov.au

© Government of South Australia, 2014 | 0889-11 JUNE 2014



This publication is licensed under a Creative Commons Attribution Australia Licence v3.0. For terms see: <http://creativecommons.org/licenses/by/3.0/au/deeden>.

Disclaimer | While care has been taken to ensure the accuracy and currency of the information in this publication, at the time of reading it may not be sufficiently accurate, current or complete to suit your individual needs. Reliance on the information in this publication is at your own risk. SafeWork SA accepts no liability for any loss resulting from your reliance on it. To best meet your work health and safety obligations refer to current Acts, Regulations and Codes of Practice.