

**OCCUPATIONAL SAFETY and HEALTH and ELECTRICITY LICENSING
AMENDMENT (LIVE WORK) REGULATIONS 2017**

EXPLANATORY NOTES

RELATING TO THE CONSULTATION DRAFT OF THE PROPOSED
AMENDMENT REGULATIONS CONCERNING WORK ON
ENERGISED ELECTRICAL INSTALLATIONS

BACKGROUND

De-energising electrical installations is the most effective means of eliminating the hazards poses by electricity. This approach is the natural conclusion of any risk assessment conducted to meet the general duty of care under the *Occupational Safety and Health Act 1984*. It is also emphasised in the training for electrical workers and in numerous publications issued by the Department of Commerce - EnergySafety and WorkSafe Divisions. Despite this, four electrical workers have lost their lives and another two were seriously injured while doing electrical work during the past three years. Two of these fatalities occurred in the roof space of domestic dwellings.

EnergySafety regularly reminds electrical workers about the importance of isolating circuits and testing to ensure they are not energised prior to starting work. In 2008, it published a Code of Practice titled *Safe Low Voltage Work Practices by Electricians* which addresses general electrical safety obligations, particularly those applicable to live work. The Code is still applicable. Similarly, WorkSafe has issued safety alerts and bulletins reminding workers about the hazards of working in roof spaces.

Following these incidents, it became evident that industry was not paying heed to regulators' advice. The Director of Energy Safety and the WorkSafe Western Australia Commissioner subsequently proposed that legislation be amended to mandate appropriate safety precautions.

In March 2016, the Minister for Commerce approved drafting amendments to the Occupational Safety and Health Regulations 1996 (OHSR) and the Electricity Licensing Regulations 1991 (ELR).

Consequently, amendment regulations have been drafted to -

- a. prohibit certain types of electrical work on or near energised electrical installations; and
- b. require the electricity supply to be switched off at the electrical installation's main switch when work is to be undertaken in the roof space of specified types of buildings.

This document provides information about the proposed amendments so that persons to whom the regulations will apply are able to consider the effect on their business and provide suggestions about how the proposed amendments can be improved to achieve the goal of preventing any more fatalities or serious injuries caused by personal contact with energised parts.

The amendment regulations are in two parts. The first part deals with amendments to the OSHR and the second part deals with amendments to the ELR.

The two sets of regulations are complementary and apply jointly, severably and contemporaneously. The OSHR deals with work in the roof space and the ELR deals with electrical work on or near energised electrical equipment.

Because the two sets of regulations cross-reference each other it is possible that a single offence could be subject to action under both. The Sentencing Act 1995 section 11(1) provides for this but limits any penalty to that prescribed under only one set of regulations. WorkSafe and EnergySafety will continue to work cooperatively to determine the most effective approach to investigate potential breaches of their respective legislation.

Section 19 of the Occupational Safety and Health Act 1984 requires employers, so far as is practicable, to provide and maintain a working environment that does not expose workers to hazards. This applies to all types of work including electrical work. Section 20 of that Act requires employees to take reasonable care to ensure the safety and health of themselves and any other person in the workplace.

PROPOSED AMENDMENTS TO THE OCCUPATIONAL SAFETY AND HEALTH REGULATIONS 1996

1. In regulation 1.3 the definition of ***electrical installation*** has been inserted.
2. The existing regulation 3.58 has been deleted and a new regulation inserted in its place. This regulation deals with the preparations to be taken before electrical work is commenced on de-energised electrical equipment.
3. In subregulation (1) in the definition of ***energised*** the word “separated” will be replaced with the word “isolated” in the final version of the regulation.
4. In subregulation (2) the network operators referred to in the Electricity (Network Safety) Regulations 2015 are Horizon Power, Western Power, BHP Billiton and Rio Tinto.
5. Subregulation (3) clarifies what de-energised and isolated means.

6. Regulation 3.59A requires the specified duty holders (the employer, main contractor, self-employed person, person having control of the workplace, person having control of access to the workplace) to ensure an electrical installation is de-energised prior to the commencement of electrical work.

If it is proposed to carry out electrical work on the electrical installation or a part of it the specified duty holder must ensure the installation or that part of it is tested by a competent person and if found to be energised is de-energised and isolated by a competent person. Regulation 1.3 of the OSHR defines a competent person for the purpose of testing.

If the work is electrical installing work to be carried out under the ELR, then the competent person for testing and the competent person to conduct electrical work need not be the same individual.

7. Regulation 3.59B deals with work (of any type) in the roof space of domestic type buildings Class 1, 2 or 10a, as classified in the Building Regulations 2012, and includes these types of buildings even if their use has changed to non-domestic activities (it's the class of the building not the use of it that matters). Note: To be certain that all of that part of the electrical installation in the roof space of these classified buildings has been de-energised it will be necessary to turn the electricity supply off at the main switch.

8. Service apparatus refers to the cables and wires that connect the electricity network to the consumer's electrical installation. The network operator might own a part of the service apparatus and the consumer might own a part of the service apparatus.

9. Subregulation (2) requires the person in charge of the business to ensure that no work is done in a roof space unless the electrical installation in the roof space is de-energised.

It is permissible for any service apparatus in the roof space to remain energised, but additional care should be taken to ensure that the safe work method statement recognises the presence of energised service apparatus in the roof space and that electrical work is not carried out near the service apparatus. Note: In these classes of buildings the occupants are generally not regarded as being in charge of access to the electrical installation unless they are conducting a trade, business or undertaking at the premises.

10. Subregulation (3) prohibits an employee from entering a roof space unless the part of the electrical installation in the roof space, other than service apparatus, is de-energised. This subregulation does not prohibit occupants from entering the roof space.

11. Subregulation (4) provides for electrical equipment in individual fire-separated segments of a roof space where work is to be carried out to be de-energised during the period that the work is in progress while other segments remain energised provided that there is no direct access between segments.
12. Subregulation (5) provides that, if the work is electrical installing work to be carried out under ELR subregulation 55(3), the above provisions do not apply as a specific risk assessment and safe work method statement are required.
13. Regulation 3.65 is to be amended by deleting the words “supply authority’s” and inserting in their place the words “network operator’s”. ‘Supply authority’ is a term that over time has been reduced to apply to a person operating under the authority of certain State Agreements whereas network operator, defined in regulation 3.58, is given a wider meaning in section 5(1) of the Electricity Act 1945.
14. Regulation 3.137(1) is to be amended by -
 - a. updating the definition of **domestic construction work** by changing the reference from the Building Code of Australia 1989 to the Building Regulations 2012; and
 - b. inserting subregulation (2) that defines the meaning of **energised**.
Note: In the definition of **energised** the word “separated” will be replaced with the word “isolated” in the final version of the regulation.

PROPOSED AMENDMENTS TO THE ELECTRICITY (LICENSING) REGULATIONS 1991

1. These regulations do not apply to electrical work carried out on energised overhead conductors that form part of a network or electrical installation. Regulations relating to this activity will be prescribed in the Electricity Regulations 1947.
2. In regulation 3 the definition of **network operator** has been deleted as it repeats the definition in the Electricity Act 1945 which takes precedence.
3. Regulation 54A has been inserted after regulation 54. This regulation provides for a network operator to carry out work on service apparatus that it owns and is connected to service apparatus owned by a consumer. This is the overlap area covered in regulation 4A(2)(a) which causes work on service apparatus to be electrical work. Regulation 54A allows the network operator or other persons authorised by the network operator to carry out work on this electrical equipment without being a licenced person.

4. Regulation 55 provides the conditions under which electrical work on electrical installations can or cannot be carried out on an energised part of the electrical installation. This means that regulation 55 does not apply to work on electricity networks by network operators as the networks are not electrical installations for the purposes of the Electricity (Licensing) Regulations. Network operators must comply with the requirements of the Electricity (Network Safety) Regulations 2015.
5. Subregulation 55(1) defines some terms used within the regulation –
 - a. a **competent person** is a person who holds an electrical worker's licence endorsed as an electrician's licence. This is a different definition of competent person from that in the OSHR.
 - b. In the definition of **energised** the word "separated" will be replaced with the word "isolated" in the final version of the regulation.
6. Subregulation (2) describes when electrical installing work is carried out near an energised part of an electrical installation. Essentially, if a person is at a location where contact can be made with an uninsulated energised part of the installation either -
 - a. directly by a part of the person's body, or
 - b. indirectly by something the person is holding or controlling,then the person is or will be working near an energised part of the electrical installation.
7. Subregulation (3) prohibits electrical work on an energised part of the electrical installation unless the provisions of subregulation (4) apply.
8. Subregulation (4) relates to a person carrying out electrical installing work and provides for electrical work to be carried out on an energised part of the electrical installation if a risk assessment has been undertaken by a competent person and that person is satisfied that there is no reasonable alternative, as described in subregulation (5), to carrying out the work while the part of the electrical installation is energised. Irrespective of whether the proposed work is high risk construction work (as described in OSHR regulation 3.143), a safe work method statement must be prepared (refer to OSHR 3.143(4)) that deals with the minimisation of the identified risks. Note that under 55(4)(c) if the proposed electrical work is not high risk construction work paragraph (c) still requires a safe work method statement to be prepared.

Paragraph (c) requires the person carrying out the electrical work to use suitable personal protective equipment and safety equipment. It is always

open for the competent person to find that the residual risk is too high for the electrical work to be carried out on the energised electrical equipment.

9. Subregulation (5) prescribes circumstances under which specified electrical work can be carried out when the electrical installation is energised. It is expected that the competent person will be rigorous when determining if any of the exemptions in this subregulation apply and if the risks associated with working on an energised electrical installation can be reduced to as low as reasonably practicable. Loss of production by itself is not a satisfactory reason for working on an energised electrical installation. Another test as to the necessity of carrying out the electrical work on energised electrical equipment is considering what measures have been taken to keep the electrical installation energised during a loss of the supply of electricity from the network or private generating plant.
10. Subregulation (6) relates to an electrical contractor or the holder of an in-house electrical installing work licence and repeats subregulation (4)(c) regarding the preparation of a safe work method statement. It requires work to cease if the work departs from the safe work method statement and must not resume until measures have been taken to comply with the safe work method statement. Paragraph (b) requires the responsible person to ensure that suitable personal protective equipment and safety equipment is used by the person carrying out the electrical installing work.