

Requirements for the effective supervision of apprentice electricians

Effective from [Day Month Year]

1 Document details

- 1.1 This document is the *Requirements for the effective supervision of apprentice electricians*, otherwise known as the Apprentice Supervision Requirements, for the purposes of regulation 507 of the *Electricity Safety (General) Regulations 2019 (Vic)*.
- 1.2 It is effective from [Day Month Year]. It supersedes any prior version of the *Requirements for the effective supervision of apprentice electricians* that may have been published by Energy Safe Victoria.

2 Purpose and background

- 2.1 This document outlines the responsibilities and minimum requirements for employers and supervisors to provide effective supervision of apprentice electrical workers, and the responsibilities of apprentice electrical workers themselves.
- 2.2 Under section 39 of the *Electricity Safety Act 1998 (Vic)*, an apprentice is deemed to be licensed to carry out electrical work only when working under supervision as prescribed in the *Electricity Safety (General) Regulations*.
- 2.3 Regulation 507(1) of the *Electricity Safety (General) Regulations* requires an employer of an apprentice electrical worker to ensure that any electrical installation work carried out by the apprentice is carried out under effective supervision in accordance with the Apprentice Supervision Requirements. Also, regulation 507(2) requires a licensed electrician or licensed electrical switchgear worker who is supervising an apprentice carrying out electrical installations work to supervise that apprentice in accordance with the Apprentice Supervision Requirements.
- 2.4 Regulation 507(3) of the *Electricity Safety (General) Regulations* defines the Apprentice Supervision Requirements as the *Requirements for the effective supervision of apprentice electricians*, as published or amended from time to time by Energy Safe Victoria (i.e. this document).
- 2.5 This document does not remove or limit any duty to comply with other applicable laws.

3 Definitions

- 3.1 Words and phrases used in this document have the same meaning as in the *Electricity Safety Act* and relevant regulations made under that Act, unless otherwise specified.

'**apprentice**' has the meaning given in section 39 of the *Electricity Safety Act*.

'**AS/NZS 4836**' means the Standard *AS/NZS 4836 – Safe working on or near low-voltage and extra-low voltage electrical installations and equipment*.

'**broad supervision**' has the meaning given in section 7 of this document.

'**direct supervision**' has the meaning given in section 7 of this document.

'**effective supervision**' has the meaning given in the *Electricity Safety (General) Regulations*, as reproduced in section 5 of this document.

'**electrical installation work**' has the meaning given in section 3 of the *Electricity Safety Act*.

'electrical work' has the meaning given in section 3 of the Electricity Safety Act.

'electrical worker' has the meaning given in section 3 of the Electricity Safety Act.

'general supervision' has the meaning given in section 7 of this document.

'working on or near' has the meaning given in section 4 of this document.

'relevant electrical licence' has the meaning given in section 5 of this document.

4 Employers – your responsibilities

- 4.1 An employer of an apprentice is responsible for having in place the appropriate arrangements that ensure the quality of apprentice training, and their safety and supervision. An employer of an apprentice is also responsible for continuously monitoring and assessing the effectiveness of those arrangements and making adjustments as necessary to deliver those intended outcomes.
- 4.2 The employer must appoint a supervisor who is responsible for providing effective supervision of the apprentice, ensuring that the supervisor:
- holds a current relevant electrical licence
 - is competent and has the capacity to supervise the work of the apprentice
 - agrees to supervise the apprentice, and
 - is aware of their responsibilities and the requirements as outlined in this document.
- 4.3 The employer must otherwise ensure:
- that a supportive work environment is provided that enables apprentices to voice concerns if they feel the supervision doesn't meet the requirements in this document
 - the correct application of the levels of supervision as outlined in sections 7 and 11 of this document
 - compliance with the ratios of supervisors to apprentices as outlined in section 8 of this document
 - compliance with the conditions for carrying out isolation procedures and fault finding as outlined in sections 9 and 10 of this document, and
 - apprentices do not carry out work on or near any live or energised electrical equipment (where work on or near is defined in AS/NZS 4836) unless permitted under the conditions for carrying out isolation procedures or fault finding as outlined in sections 9 and 10 of this document.
- 4.4 The *Occupational Health and Safety Act 2004* (Vic) places a duty on employers to provide employees (including apprentices) with such supervision as is necessary to enable them to perform their work in a way that is safe and without risk. The requirements set out in this document in no way remove or limit an employer's duties to employees under that Act. Queries about your obligations under that Act should be directed to WorkSafe Victoria.

5 Supervisors – your responsibilities

- 5.1 A supervisor of an apprentice is responsible for providing effective supervision to the apprentice and for ensuring that the apprentice has opportunities to learn and practise on-the-job skills. A supervisor of an apprentice is also responsible for ensuring all work is completed to the required work standard and complies with the Electricity Safety Act and relevant regulations made under that Act.
- 5.2 The supervisor must be competent in the work being carried out by the apprentice they are supervising and hold a current relevant electrical licence.
- 5.3 'Relevant electrical licence' means:
- if the apprentice is an apprentice electrician,
 - an Electrician's licence (also known as an A Grade licence) issued by Energy Safe Victoria under the Electricity Safety Act, or

- a licence issued by a licensing authority or body in another Australian state or territory that is equivalent to an Electrician's licence
- if the apprentice is an electrical switchgear or electrical fitter apprentice, an Electrical Switchgear Worker's licence issued by Energy Safe Victoria under the Electricity Safety Act.

5.4 'Effective supervision' in relation to electrical work means:

- being present at the site of the electrical work to the extent necessary to ensure that the work is being correctly performed and carried out in accordance with the Electricity Safety Act and the Electricity Safety (General) Regulations, and
- being aware of the details of the work being performed and giving detailed instructions and directions with respect to the work.

5.5 To provide effective supervision the supervisor must, at a minimum:

- assess whether the workplace is a safe working environment for the apprentice and, if not, take action to ensure that the environment is made safe prior to the apprentice commencing work
- determine the level of supervision that applies to the apprentice for the work begin performed in accordance with sections 7 and 11 of this document, which includes undertaking a competency assessment as necessary
- provide the determined level of supervision, outlining the details of the electrical work and giving instruction and direction to the apprentice in accordance with the levels of supervision outlined in section 7 of this document
- comply with the ratios of supervisors to apprentices as outlined in section 8 of this document
- ensure the apprentice does not carry out work on or near any live or energised electrical equipment (where work on or near is defined in AS/NZS 4836) unless permitted under the conditions for carrying out isolation procedures or fault finding as set out in sections 9 and 10
- provide a supportive work environment that enables apprentices to voice concerns if they feel the supervision doesn't meet the requirements in this document
- continuously train, mentor and monitor the apprentice's progress.

5.6 In all cases, the supervisor is the responsible person for the compliance of the electrical work and is responsible for carrying out isolation procedures, confirmation of isolation, compliance testing and commissioning/energisation. However, an apprentice should have the opportunity to carry out some of these tasks in the final stages of their apprenticeship in accordance with sections 9 and 10 of this document.

6 Apprentices – your rights and responsibilities

6.1 An apprentice must not undertake work unless they have a supervisor who is providing effective supervision in accordance with the requirements in this document. This is because, under the Electricity Safety Act, apprentices are deemed to be licensed when working under effective supervision, and a training contract under the *Education and Training Reform Act 2006 (Vic)*. Therefore, without effective supervision being provided in line with the requirements in this document, apprentices are not deemed to be licensed.

6.2 Apprentices therefore must have the right to voice any concerns they may have about the supervision they are provided. Apprentices must be encouraged and empowered by both employers and supervisors to speak up if there they hold any concerns about whether the supervision they are receiving is in line with the requirements outlined in this document.

7 Levels of supervision

- 7.1 Supervision falls into the three categories as shown in Table 1 – direct, general and broad. These levels reflect apprentices' diminishing need for supervision as they gain skills, competency and confidence.
- 7.2 Direct supervision is one-on-one supervision and is essential for every new apprentice and when an apprentice is carrying out a particular type of electrical work for the first time. As an apprentice learns a particular skill or type of work under direct supervision, they may be deemed competent by the supervisor to move to general and then broad supervision.
- 7.3 The supervisor must undertake a competency assessment in consultation with the apprentice to determine the level of supervision to be applied for a given work task, taking into account the matters outlined in paragraph 7.4. However, the level of supervision to be applied is always subject to the conditions and limitations outlined in sections 8, 9, 10 and 11 of this document.
- 7.4 When assessing the competency of an apprentice for a task, the supervisor must consider whether the apprentice:
- has an awareness of safety requirements
 - has previously performed the task (direct supervision is likely to always be necessary the first time an apprentice performs a task)
 - can perform the task to an appropriate technical standard
 - understands workplace policies and procedures for performing the task
 - deals well with everyday problems that may occur in performing the task (i.e. technical issues that regularly arise while doing the task)
 - understands why the task is performed in a certain way or sequence, and
 - applies these skills consistently.

Table 1: Levels of supervision

Supervision	Explanation
Direct	<p>Under direct supervision, the supervisor must provide specific and constant guidance to the apprentice. This will include the supervisor closely liaising with and monitoring the apprentice, and continually reviewing their work practices and the standard of their work.</p> <p>When applying direct supervision, the supervisor must:</p> <ul style="list-style-type: none"> • remain on the same work site as the apprentice • be able to communicate directly with the apprentice at all times • remain within visual contact and audible range (within sight and earshot) of the apprentice • provide instruction and guidance to the apprentice • observe all aspects of the apprentice's work to ensure it is performed safely and correctly.
General	<p>Under general supervision, the supervisor must provide the apprentice with instruction and direction for the tasks to be performed, with progressive checks and relevant testing to be carried out while the work is being undertaken.</p> <p>When applying general supervision, the supervisor must:</p> <ul style="list-style-type: none"> • remain on the same work site as the apprentice • be readily available to communicate directly with the apprentice when required • be readily available in the immediate work area of the apprentice • provide instruction and guidance to the apprentice

	<ul style="list-style-type: none"> observe all aspects of the apprentice's work to ensure it is performed safely and correctly.
Broad	<p>Under broad supervision, the supervisor must consult with the apprentice regarding the tasks being undertaken, providing instruction and direction as required. However, the supervisor does not need to be physically on the same work site as the apprentice at all times.</p> <p>When applying broad supervision, the supervisor must:</p> <ul style="list-style-type: none"> consult with the apprentice about the tasks being undertaken provide instruction and direction as required provide periodic, face-to-face contact throughout the day/shift – checking that the apprentice's work complies with technical and safety requirements remain readily contactable by the apprentice.

8 Ratio of supervisors to apprentices

8.1 At any time, one supervisor must not supervise:

- more than one apprentice under direct supervision (a ratio of 1:1)
- more than three apprentices under general supervision (a ratio 1:3)
- more than five apprentices under broad supervision (a ratio of 1:5).

8.2 A supervisor must not supervise a combination of more than one apprentice under direct supervision and one apprentice under general supervision.

8.3 A supervisor must not supervise a combination of more than one apprentice under direct supervision and three apprentices under broad supervision.

8.4 A supervisor must not supervise a combination of more than one apprentice under general supervision and three apprentices under broad supervision.

8.5 In addition to the requirements set out in this section, the level of supervision to be applied is always subject to the conditions and limitations set out in sections 9, 10 and 11 of this document.

9 Conditions for carrying out isolation procedures

9.1 During their apprenticeships, apprentices should have the opportunity to undertake isolation procedures but always under direct supervision. This includes:

- isolation of electricity supply
- testing to confirm isolation, and
- commissioning / energising.

10 Conditions for carrying out fault finding

10.1 There are two categories of fault finding:

- Basic fault finding: This type of work does not involve live electrical components.
- Advanced fault finding: This work is done on or near live electrical conductors or parts.

10.2 During the third and fourth years of apprenticeship, apprentices should have the opportunity to perform fault finding under the following conditions:

- A third-year apprentice may do basic fault finding but only under direct supervision and only if the supervisor has assessed and deemed them competent to undertake the task. A third-year apprentice should not attempt advanced fault finding.

- A fourth-year apprentice or higher may do advanced fault finding but only under direct supervision and only if the supervisor has assessed and deemed them competent to undertake the task.

10.3 The supervisor must ensure that the procedures for such work comply with the requirements outlined in AS/NZS 4836, which includes:

- safe working practices
- ensuring proper isolation of the power supply
- using the right tools and safety equipment, and
- using appropriate testing equipment.

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11 Levels of supervision for specified types of electrical work

11.1 The level of supervision for the types of electrical specified in Table 2 must be at least the level of supervision shown in that table but should be adjusted based on a competency assessment in accordance with section 7 of this document, subject to the following conditions:

- electrical work requiring direct supervision must never be supervised under general or broad supervision, and
- electrical work requiring general supervision must never be supervised under broad supervision (but can be supervised under direct supervision).

Table 2: Levels of supervision for specified types of electrical work

Type of electrical work	Year of apprenticeship			
	First	Second	Third	Fourth (+) or final
New electrical installations (not connected to supply)	Direct	General	Broad	Broad
Maintenance, alterations and additions to existing electrical installations	Direct	General	General	Broad
Consumer mains and sub-mains installation	Direct	General	Broad	Broad
Workshop assembly and maintenance of electrical equipment	Direct	General	Broad	Broad
Distribution and main switchboard installation	Direct	Direct	General	Broad
Electrical isolation of installation and equipment (subject to the conditions in section 9 of this document)	Direct	Direct	Direct	Direct
Testing to confirm isolation (subject to the conditions in section 9 of this document)	Direct	Direct	Direct	Direct
Fault finding (subject to the conditions in section 10 of this document)	Not permitted	Not permitted	Direct	Direct
Live work	<p>Work on or near any live or energised electrical equipment as defined in AS/NZS 4836 is not permitted by an apprentice.</p> <p>Testing to confirm isolation and fault-finding are exceptions but must be done under direct supervision as per sections 9 and 10 of this document. Refer to the relevant sections of AS/NZS 4836 in respect of procedures for safe working practices.</p>			