energysafe VICTORIA

Requirements for the effective supervision of apprentice electricians

Your responsibilities

Creating a safer state with electricity and gas

Your responsibilities

Energy Safe Victoria (ESV) is the state energy safety regulator for gas, electricity and pipelines in Victoria. Part of our role is to investigate electrical incidents and fatalities.

Since 2015, ESV has investigated the death of three apprentice electricians. It is incumbent on all stakeholders in the electrical trade to be vigilant in regard to the safe and effective supervision of electrical apprentices.

This pamphlet provides employers and supervisors of electrical apprentices information and guidance on our expectations for the effective supervision of apprentices.

Employer—your responsibilities

Regardless of who is tasked within the organisation to carry out the role of supervisor, the employer remains responsible for the quality of apprentice training, and their safety and supervision – including direct, general and broad supervision.

ESV expects the employer to comply with the requirements of AS/NZS 4836 — Safe working on or near low-voltage electrical installations and equipment, across the organisation where relevant.

Supervisor—your responsibilities

A supervisor of an electrical apprentice must be competent, adequately qualified in the role of supervisor and hold a Victorian A Grade electricians licence if the apprentice is an apprentice electrician. For other electrical apprentices, the supervisor would be qualified to supervise the apprentice type.It is the supervisor's responsibility to provide effective supervision to the apprentice.

Effective supervision means being:

- present at the site of the electrical work to the extent necessary to ensure that the work is being carried out safely and correctly
- aware of the details of the electrical work being performed, give instruction and direction to the apprentice
- the responsible person for the compliance of the electrical work.

The supervisor is responsible for:

- assessing whether the workplace is a safe working environment for the apprentice i.e. is the workplace in a condition that will provide for a safe working environment
- deciding what level of supervision should apply at various stages of the apprenticeship
- ensuring that the apprentice is given opportunities to learn and practice on-the-job skills
- isolating, testing and commissioning of circuits and equipment
- training, mentoring and monitoring progress on a daily basis.

Levels of supervision

Apprentices need varying levels of supervision as they acquire skills and gain confidence. This supervision falls into three categories: direct, general and broad.

Apprentices begin learning a particular skill under direct supervision. When they achieve competence in a skill, they move to general supervision for that skill.

These decisions should be made in consultation with the apprentice. It is important that an apprentice is able to voice their confidence or uncertainty in regard to their abilities and different aspects of electrical work.

Direct supervision

Direct supervision is one-on-one supervision. This is essential for every new apprentice and must be maintained during the training of a particular skill, until the apprentice has demonstrated their competence in that skill.

The supervisor shall provide specific and constant guidance to the apprentice, closely liaising and monitoring the apprentice, and continually reviewing the work practices and the standard of their work.

The supervisor shall:

- remain on the same work site as the apprentice
- provide instruction and guidance to the apprentice, and observe all aspects of the apprentice's work to ensure work is performed safely and correctly
- be able to communicate directly with the apprentice at all times
- remain within audible range (earshot) of the apprentice.

General supervision

General supervision is a stage that an apprentice enters as they gain skills that allow them to function more independently. The apprentice will move from direct supervision to general supervision only in the skills where they have demonstrated competence.

As part of general supervision, the supervisor shall 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.

The supervisor shall:

- remain on the same work site as the apprentice
- provide instruction and guidance, and observe all aspects of the apprentice's work to ensure work is performed safely and correctly
- be readily available to communicate directly with the apprentice when required
- be readily available in the immediate work area.

Broad supervision

The apprentice at this level of supervision must be able to demonstrate electrical knowledge and skills relevant to the task. The apprentice will not require constant guidance from the supervisor whilst performing familiar tasks. The supervisor shall consult with the apprentice regarding the tasks being undertaken, and provide instruction and direction as required.

The supervisor shall provide periodic face-to-face contact throughout the day, or work cycle, to check that the apprentice's work complies with technical and safety requirements.

Conditions for carrying out isolation procedures

In all cases, the supervisor shall be responsible for carrying out isolation procedures, confirmation of isolation, compliance testing and commissioning/ energisation.

Apprentices should have the opportunity to carry out these tasks in the final stages of their apprenticeship, but only under direct supervision and under the conditions below.

- A 3rd stage apprentice may carry out basic (not live) fault finding under direct supervision.
- A 4th stage apprentice may carry out basic (not live) fault finding under general supervision only if they have been deemed competent to do so.A 4th stage apprentice may carry out advanced fault finding and confirmation of isolation under direct supervision.

Ratio of supervisors to apprentices

An employer of electrical workers should ensure that the ratio of supervisors to apprentices is 1:2 under direct supervision and 1:4 under general supervision.

- One supervisor is to supervise no more than two apprentices under direct supervision at any one time.
- One supervisor is to supervise no more than four apprentices under general supervision at any one time.

Level of guidance

The level of guidance required for an apprentice is expected to gradually diminish from direct supervision through to general instruction to a broad direction over the stages of the apprenticeship, as competency is attained and demonstrated by the apprentice. The level of competency directly relates to the type of work being carried out.

For example; a 4th stage apprentice, who generally works on domestic installations, would not necessarily be competent to work at the same level on a construction site, or a large industrial site, and may require additional direct supervision on the requirements when introduced to these unfamiliar work sites.

Apprentice competency

Criteria essential to assessing an apprentice to be competent in a task includes:

- awareness of safety requirements
- performing the job to an appropriate technical standard
- understanding workplace policies and procedures
- dealing with everyday problems that may occur
- understand why a task is performed in a certain way or sequence
- being able to apply skills consistently.

Elements of effective supervision

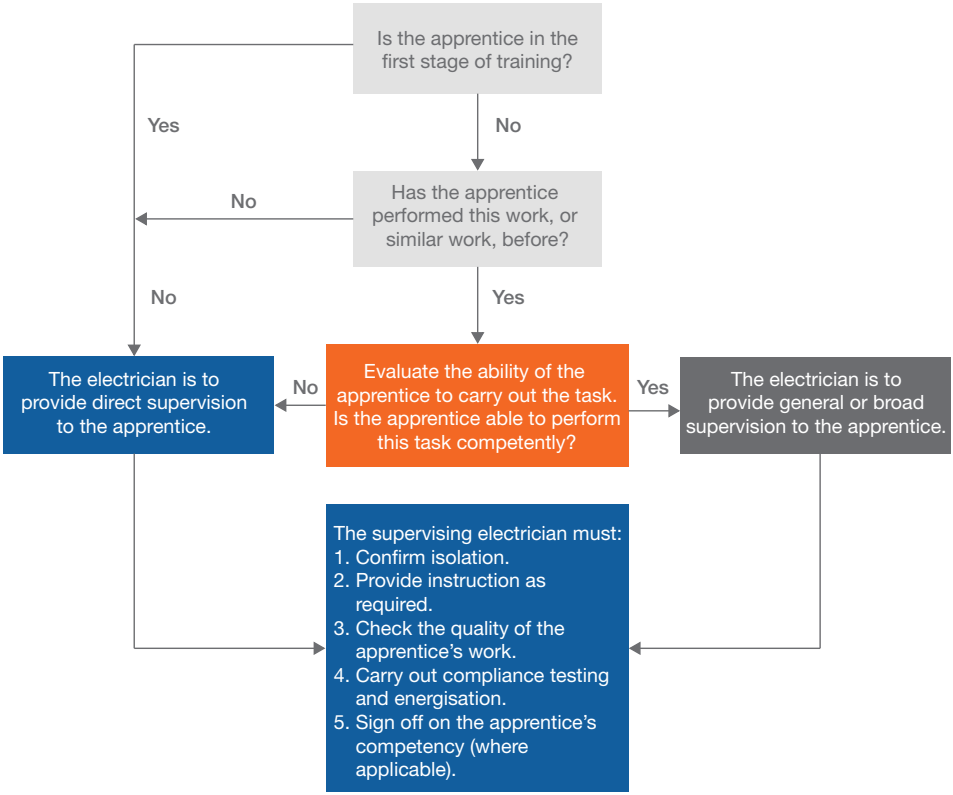
An effective workplace supervisor:

- provides a safe and supportive workplace
- trains the apprentice in safe work practices
- provides technical training
- acts as a positive role model
- manages the apprentice's training needs
- helps the apprentice develop problem solving skills
- provides regular feedback and encouragement
- discusses and develops on-the-job training with the apprentice.

General guidance: supervision levels

Type of work	Apprentice training stages	Minimal level of supervision
New electrical installations (not connected to supply) Cable tray installation Rough in light and power	1st	Direct
	2nd	Direct/ General
	3rd	General/Broad
	4th or final	Broad
Maintenance, alterations and additions to existing electrical installations Sub-mains and main installation	1st	Direct
	2nd	Direct/ General
	3rd	General
	4th or final	Broad
Workshop assembly and maintenance of electrical equipment	1st	Direct
	2nd	Direct/ General
	3rd	General/Broad
	4th or final	Broad
Distribution and main switchboard installation	1st	Direct
	2nd	Direct
	3rd	Direct/General
	4th or final	General/Broad
Electrical isolation of installation and equipment	1st	Direct
	2nd	Direct
	3rd	Direct
	4th or final	Direct
Testing	1st	Direct
	2nd	Direct
	3rd	Direct
	4th or final	Direct
Fault finding	3rd	Direct
	4th or final	Direct
Live work	Work on or near any live/energised electrical installation or equipment is not pernitted Testing to confirm isolation and fault-finding are exceptions and must be under direct supervision. Refer to above section and AS/NZS 4836.	

General guidance: supervision levels



Occupation Health and Safety Act 2004

The Occupational Health and Safety Act 2004 places a duty of care on employers to provide such supervision to employees as necessary to enable the employees to perform their work in a manner that is safe and without risks to health. The use of the above requirements in no way removes or limits the employer's duty of care under Occupational Health and Safety legislation in providing a safe workplace.

More information

In the event of an enquiries, please contact:

Electrical Installation Safety

Energy Safe Victoria

Level 1, Building 4

Brandon Business Park

Glen Waverley VIC 3150

P (03) 9271 5414