Consultation Paper
SUPERVISION OF ELECTRICAL WORK
July 2017

Background
In March and April 2017, EnergySafety sought comments from industry on some proposed changes to the Electricity (Licensing) Regulations 1991 and the associated safe working guidelines for electrical workers and apprentices.

A number of the submissions received included comments on the effective supervision of apprentices. These comments have been considered and some of the original supervision proposals have been revisited.

EnergySafety is now conducting a second round of consultation on the new supervision proposals.

Structure of this Consultation Paper
This paper is set out as follows:
1. A summary of the main issues raised by respondents on supervision
2. Discussion and proposed response to the issues raised
   • Description of the issue as understood by EnergySafety
   • Brief discussion
   • Proposed changes in response to industry comments
   • Specific questions which EnergySafety invites respondents to address in their comments on each issue
3. Reference documents

Submissions
Submissions are invited by COB 25 August 2017.

Written submissions and comments should be sent to:

   EnergySafety Division
   Department of Mines, Industry Regulation and Safety
   Locked Bag 14
   Cloisters Square WA 6107
   Attention: Mr Saj Khan

or emailed to: supervision@dmirs.wa.gov.au
1. **Summary of key supervision issues raised in the first round of consultation**

- Introduction of a three-tiered supervision framework instead of two.
- Changes to the definitions of direct and general supervision.
- Restricting the number of apprentices being supervised at a time.
- Changes to the apprentice supervision application table in the guidelines.
- Guidelines for practical assessment of supervision needs would be a useful addition to the guidelines.

2. **Discussion of key issues**

**Issue 1 - Three levels of supervision**

In the previous consultation documents, EnergySafety proposed definitions of what characterises “direct supervision” and “general supervision”.

Several respondents recommended adopting a framework comprising 3 levels of supervision, in lieu of the 2 levels proposed. Essentially, this would mean adding a third level somewhere between “direct” and “general” supervision (as defined in the previous consultation documents).

EnergySafety has considered this proposal and believes it has merit. The potential benefits in defining a third ‘intermediate’ level of supervision include:

- It provides useful guidance on what constitutes ‘effective supervision’ as apprentices progressively develop their knowledge and experience and enable the controlled transition from direct to general supervision over time, maintaining safe working conditions for the apprentice; and
- It provides flexibility to lessen the level of direct supervision required on particular work tasks that are familiar and where the apprentice has consistently demonstrated a satisfactory level of competence.

EnergySafety therefore proposes the use of 3 levels of supervision as shown in the table below.

**Issue 2 – Changes to definitions of direct and general supervision**

Respondents also suggested numerous changes to the previous draft definitions of “direct” and “general” supervision. The comments received were considered in formulating the proposed new definitions of direct, intermediate and general supervision shown below.

---

<table>
<thead>
<tr>
<th>Direct supervision</th>
<th>Intermediate supervision</th>
<th>General supervision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor must:</td>
<td>Supervisor must:</td>
<td>Supervisor:</td>
</tr>
<tr>
<td>• remain on the same work site as the apprentice; and</td>
<td>• remain on the same work site as the apprentice; and</td>
<td>• is not required to be on the same work site as the apprentice at all times; and</td>
</tr>
<tr>
<td>• provide instructions, guidance and observation of all aspects of the apprentice's work to ensure work is performed correctly and safely; and</td>
<td>• provide instruction, guidance and observation of all aspects of the apprentice’s work to ensure work is performed correctly and safely; and</td>
<td>• must meet with the apprentice on site and provide direction at the start of work; and</td>
</tr>
<tr>
<td>• be able to communicate directly with the apprentice at all times; and</td>
<td>• be readily available to communicate directly with the apprentice when required.</td>
<td>• must attend site at regular intervals to ensure work is being performed correctly and safely; and</td>
</tr>
<tr>
<td>• remain within visual range of the apprentice.</td>
<td></td>
<td>• must be readily available by electronic communication to provide advice and guidance; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• must attend site on completion of the electrical work to verify the work.</td>
</tr>
</tbody>
</table>

**Questions:**

1. Is the concept of 3 levels of supervision of apprentices a useful improvement in terms of better safety outcomes for apprentices and practical application in the workplace, compared with 2 levels?
2. Do the proposed definitions adequately and appropriately differentiate between the 3 levels?
3. Are there alternatives to the proposed names assigned to the different levels of supervision i.e. “Direct”, “Intermediate” and “General” that would be more appropriate or meaningful for industry? Please explain why the suggested alternatives are preferred.
Issue 3 - Proposed regulations regarding application of different levels of supervision

In reviewing the appropriate application of different levels of supervision to apprentices, EnergySafety has considered:

- The comments from respondents; and
- The need to allow flexibility for a supervising electrical worker to assess and provide variable levels of supervision to different individuals in different circumstances; and
- The effect of the 3-tiered supervision framework.

The following principles for determining the level of supervision appropriate for electrical apprentices are proposed for inclusion in both the new regulations and safe working guidelines:

**Principle 1**
Apprentices in the first year of their apprenticeship must not perform any electrical work unless under direct supervision.

**Principle 2**
For apprentices in the second year of their apprenticeship, the supervising electrical worker may apply an intermediate level of supervision, for certain tasks after undertaking a diligent assessment of the apprentice’s competence to perform the proposed work.

**Principle 3**
For apprentices in the third, fourth or final year of their apprenticeship, the supervising electrical worker may apply a general level of supervision, for certain tasks, after undertaking a diligent assessment of the apprentice’s competence to perform the proposed work.

**Principle 4**
Apprentices must not undertake electrical work on energised wiring or electrical equipment except that an apprentice in the third, fourth or final year of training may, under direct supervision of the supervising electrical worker, carry out fault finding and testing on energised wiring and electrical equipment.

**Questions:**

4. Are these principles for supervision of electrical apprentices reasonable and workable in practice? If not, please provide examples of circumstances where they would be difficult to apply.

5. Do you support the inclusion of minimum levels of supervision (based on these principles) for apprentices in regulations? If not, please provide reasons why this should not be done.
Issue 4 - Proposed regulation regarding the number of apprentices being supervised by a supervising electrical worker

The original proposal issued for comment in March 2017 was as follows:

“... shall ensure the number of persons being supervised by the supervising electrical worker does not exceed three at any one time and the supervising electrical worker is working at the same site as the apprentices”

Several respondents stated that a “hard” limit of supervising no more than 3 apprentices at any one time by a supervising electrical worker is an unreasonable restriction in practice.

Comments received ranged from suggestions for alternative numbers and different mixes of training years through to leaving supervisory decisions entirely to the discretion of the supervising electrical worker, based on his/her assessment of the situation.

Given the comments received and the 3 levels of supervision defined, EnergySafety now proposes the following:

“... a person employing an electrical worker shall ensure that a supervising electrical worker is supervising not more than two (2) apprentices under direct supervision at any one time and not more than four (4) apprentices under intermediate supervision at any one time.”

Note: For the avoidance of doubt, this does not limit the number of apprentices being supervised under general supervision.

It is acknowledged that the choice of particular numbers is very subjective and needs to be guided by what is considered to be reasonable and “good industry practice”, but will not be ideal in all situations.

A key consideration in this proposal is that both direct and intermediate levels of supervision require the supervising electrical worker to remain on the same work site as the apprentice at all times.

Questions:

6. Is this proposal reasonable and workable in practice? If not, please provide examples of where this approach would be difficult to apply.

7. Are there better alternatives to providing effective and appropriate control of the number of apprentices being supervised to maintain safe working conditions?
The supervision application table in the two safe working guidelines documents will be amended to reflect:

- The proposed changes to regulations, incorporating:
  - introduction of the third “intermediate” level of supervision; and
  - the four principles set out in the Issue 3 discussion above; and
- Numerous comments by respondents and, in particular, the need for apprentices to participate in and practice the electrical isolation process in their early training years.

The proposed new table (below) sets out the recommended minimum supervision levels for apprentices performing different types of work, incorporating the four principles set out in the Issue 3 discussion above.

<table>
<thead>
<tr>
<th>Type of work</th>
<th>Apprentice training year</th>
<th>MINIMUM supervision level required</th>
</tr>
</thead>
<tbody>
<tr>
<td>New electrical installations (not connected to electricity supply)</td>
<td>1st</td>
<td>Direct</td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td>Intermediate</td>
</tr>
<tr>
<td></td>
<td>3rd</td>
<td>General</td>
</tr>
<tr>
<td></td>
<td>4th or final</td>
<td>General</td>
</tr>
<tr>
<td>Maintenance, alterations and additions to existing electrical installations (connected to electricity supply)</td>
<td>1st</td>
<td>Direct</td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td>Intermediate</td>
</tr>
<tr>
<td></td>
<td>3rd</td>
<td>Intermediate</td>
</tr>
<tr>
<td></td>
<td>4th or final</td>
<td>General</td>
</tr>
<tr>
<td>Workshop assembly and maintenance of electrical equipment (not connected to electricity supply)</td>
<td>1st</td>
<td>Direct</td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td>Intermediate</td>
</tr>
<tr>
<td></td>
<td>3rd</td>
<td>General</td>
</tr>
<tr>
<td></td>
<td>4th or final</td>
<td>General</td>
</tr>
<tr>
<td>Electrical isolation of installations and equipment (not including final step of testing for “dead”)</td>
<td>1st</td>
<td>Direct</td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td>Intermediate</td>
</tr>
<tr>
<td></td>
<td>3rd</td>
<td>Intermediate</td>
</tr>
<tr>
<td></td>
<td>4th or final</td>
<td>General</td>
</tr>
<tr>
<td>Testing and fault-finding (both ‘energised’ and ‘supply not connected’ installations; including final isolation and testing for “dead”)</td>
<td>1st</td>
<td>Not permitted</td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td>Not permitted</td>
</tr>
<tr>
<td></td>
<td>3rd</td>
<td>Direct</td>
</tr>
<tr>
<td></td>
<td>4th or final</td>
<td>Direct</td>
</tr>
<tr>
<td>Live work</td>
<td>Work on any live/energised electrical circuit or equipment is prohibited (other than testing and fault-finding)</td>
<td></td>
</tr>
</tbody>
</table>

Questions:

8. Do you have any comments about the minimum levels of supervision listed in this table?
9. Do you have any suggestions for improvement? Please provide appropriate reasons and supporting information to justify the change.
Issue 6 - Assessment of the appropriate level of supervision for an apprentice

In response to the suggestion by industry, it is proposed to include the following flowchart in the 'safe working guidelines for electrical workers' to provide practical guidance on how the required level of supervision might be assessed by the supervising electrical worker:

Questions:

10. Do you support the inclusion of this flowchart in the 'safe working guidelines for electrical workers' publication?

11. Do you have any comments on the details in the flowchart?
3. Reference documents

The following related documents are available for reference, as required:

**Legislation (current)**

- Electricity (Licensing) Regulations 1991
  

**EnergySafety publications (current)**

- Electrical worker safety guidelines
  

- Electrical apprentice safety guidelines
  

**Previous proposed amendments**

Documents issued previously for consultation in March/April 2017 can be viewed at


**EnergySafe Victoria requirements for supervision of apprentices**