

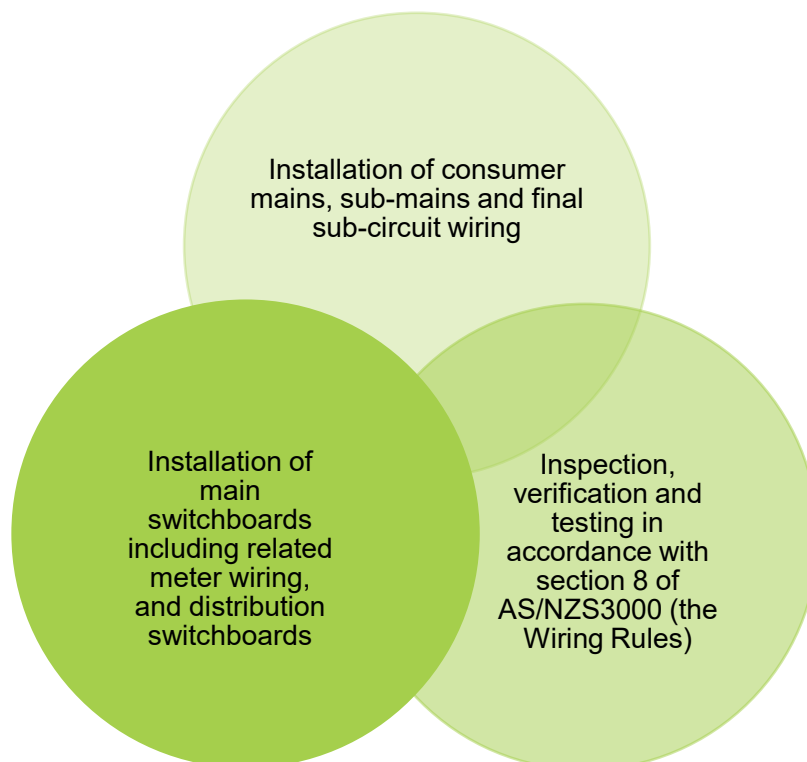
## **ELECTRICIAN APPRENTICESHIPS**

### **INFORMATION TO SUPPORT THE COMPLETION OF AN EMPLOYER RESOURCE ASSESSMENT**

An employer resource assessment (ERA) is an assessment undertaken by a supervising registered training organisation (SRTO) at the commencement of an electrical apprenticeship to determine whether the business has the appropriate scope of work and the physical and human resources necessary to ensure that the on-the-job training will enable the apprentice to successfully complete the apprenticeship.

Under the *Electrical Safety Act 2002*, a person must be the holder of an electrical mechanic licence to perform electrical installation work. The electrical mechanic licence can only be achieved through the successful completion of UEE30811 Certificate III in Electrotechnology Electrician or UEE30820 Certificate III in Electrotechnology Electrician.

The UEE30811/UEE30820 qualification is quite broad and apprentices can be exposed to a wide variety of electrical work during the course of their apprenticeship. However, as this qualification is the only pathway to the electrical mechanic licence, it is vital these apprentices gain significant workplace experience in electrical installation work in all of the following:



To ensure apprentices gain a full understanding of electrical installation work, the work may be carried out on any type of electrical installation, but must include at least multi-phase commercial or industrial installations and expose the apprentice to the full “life-cycle” of the job including:

- involvement in the initial design and planning
- Installation
- verification

Apprentices need to develop a practical understanding of the Wiring Rules and other relevant standards that may apply to a particular installation (e.g. AS/NZS3008, AS/NZS3012), including:

- correct selection and arrangement of cables and control and protection devices
- correct selection and installation of wiring systems
- correct selection and installation of electrical equipment
- the requirements of the MEN earthing system
- requirements for damp situations and special electrical installations
- verification and testing

UEE30811/UEE30820 are the only qualifications that lead to the *electrical mechanic* licence outcome which permits electrical installation work. Sufficient on-the-job work experience must be undertaken in a context that addresses the key requirements of the core installation units of:

#### UEE30811

- UEENEEG063A – Arrange circuits, control and protection for general electrical installations
- UEENEEG103A – Install low voltage wiring and accessories
- UEENEEG104A - Install appliances, switchgear and associated accessories for low voltage electrical installations
- UEENEEG107A – Select wiring systems and cables for low voltage general electrical installations
- UEENEEG105A – Verify compliance and functionality of low voltage general electrical installations

#### UEE30820

- UEEEL0003 – Arrange circuits, control and protection for electrical installations
- UEEEL0012 – Install low voltage wiring, appliances, switchgear and associated accessories
- UEEEL0018 – Select wiring systems and select cables for low voltage electrical installations
- UEEEL0039 – Design, install and verify compliance and functionality of general electrical installations

The installation of consumer mains, sub-mains and final sub-circuits installed in typical domestic, commercial and industrial installations which fall within the scope of the Wiring Rules is the only type of work that achieves this.

When conducting an employer resource assessment (ERA) for an employer seeking to register an apprentice in UEE30811/UEE30820 Certificate III in Electrotechnology Electrician, three broad employer categories are common.

#### **CATEGORY 1 – WIDE RANGE OF INSTALLATION WORK**

The employer will carry out a wide range of electrical installation work that includes at least a variety of multi-phase commercial or industrial installations. The work will provide significant and repeated exposure to the installation of consumer mains, sub mains and final sub-circuit wiring as well as the installation of main switchboards, distribution switchboards and final sub-circuit equipment. Apprentices will gain significant exposure to verification and testing of electrical installation wiring in accordance with the Wiring Rules and other applicable standards. This scope of work will comfortably support the issue of a UEE30811/UEE30820 qualification and subsequent electrical mechanic licence.

The ERA is likely to be straight forward and a temporary transfer under the *Further Education and Training Act 2014* to a host employer will not be required. However, SRTOs need to monitor the workplace throughout the apprenticeship to ensure the scope of work continues to support the UEE30811/UEE30820 qualification.

Typical employers who are generally able to provide this variety of work are electrical contractors engaged in the full range of electrical contracting work. Apprentices employed by these employers are likely to be eligible for an electrical mechanic licence upon completion of the apprenticeship.

**NOTE: Electrical contractors who specialise (e.g. solar installation work only) may not fall within Category 1 and will likely be within Category 3 below.**

### **CATEGORY 2 – NO INSTALLATION WORK**

The employer does not carry out electrical installation work. The electrical work may, for example, focus on maintenance and servicing of electrical equipment and existing electrical installations. In such cases, electrical workers do not need to be the holders of an electrical mechanic licence. Such businesses would not be able to provide sufficient electrical installation wiring experience to support a UEE30811/UEE30820 qualification but may support a qualification such as UEE33011/UEE33020 Certificate III in electrical fitting that can lead to an electrical fitter licence or another qualification that leads to a restricted electrical work licence outcome, such as a refrigeration and air-conditioning or an instrumentation and process control tradesperson.

Typical employers that may fall within Category 2 include:

- switchboard manufacturers
- appliance servicing businesses
- machine repairers/armature winders
- refrigeration and air-conditioning businesses

**Apprentices employed by these employers are unlikely to be eligible for an electrical mechanic licence.**

The ERA should focus on determining whether the range of work can support an electrical fitter licence or a restricted electrical work licence.

It is important that apprentices and employers understand that an electrical fitter licence outcome does not prevent them from later gaining an electrical mechanic licence through additional on and off-the-job training after the completion of their apprenticeship.

### **CATEGORY 3 – LIMITED SCOPE/RANGE OF INSTALLATION WORK**

The employer will carry out a range of electrical installation work that falls within the scope of work of an electrical mechanic licence. However, the scope of electrical installation work is narrow and is insufficient to provide an apprentice with the range of experience needed for the UEE30811/UEE30820 qualification, as described for Category 1.

Typical employers that may fall within Category 3 include:

- Lift companies
- Energy providers/distribution and transmission entities
- Solar PV system installers
- Industrial workshops operators
- Mine operators
- Rail entities

With appropriate hosting arrangements through a temporary transfer under the *Further Education and Training Act 2014*, apprentices employed by these employers may be eligible for an electrical mechanic licence.

The ERA should focus on identifying the “gap” within the scope of work able to be offered and the work required to fully support a successful outcome for UEE30811/UEE30820. The ERA should identify how the gap will be met, generally through the use of “host” employers.

**In determining hosting arrangements, consideration needs to be given to:**

The scope of work able to be provided by the host employer

- More than one host may be required to provide the work experience required.

The length of time needed to address the gap

- The “narrowness” of the employer’s scope of work will determine how long an apprentice may need hosting.

The timing of the release to host employers and the duration of each release

- Consideration needs to be given to at what stage during the apprenticeship the apprentice should be hosted out. For example, it may not be useful to place an apprentice with a host within the first six months of their apprenticeship or before they have undertaken some initial off-the-job training.
- The duration of a release is important for ensuring effective underpinning support for the qualification. For example, one day a week over 12 months is unlikely to expose the apprentice to the full typical “sequence” of the completion of an electrical installation. Similarly, a four week release may be ineffective if the host does not have suitable work underway during that time.

**To fully ensure that hosting is effective, the SRTO and employer need to ensure:**

- the host employer is subject to an abbreviated ERA process to ensure they can deliver the scope of work required to address the initial employer’s gap. This information would form an addendum to the original employer’s workplace ERA.
- that hosting takes place in a way that ensures the apprentice is actually exposed to the type of work required to address the gap.
- they monitor the hosting arrangements to ensure they are implemented and the apprentice is receiving exposure to the tasks which were identified as a gap in the original ERA

Best practice to gain the desired result from a hosting arrangement may involve the employer and apprentice having a weekly debrief to ensure the range of work required is being undertaken by the apprentice. A check of eProfiling or alternate training record may assist with this process.

Hosting arrangements need to be reported to the Department of Education and Training as per section 24-25 of the *Further Education and Training Act 2014* which covers the temporary transfer of a training contract.

**NOTE: Where time spent hosted with other employers becomes a significant component of the on-the-job training, further consideration should be given to whether UEE30811/UEE30820 is the most suitable qualification for the original employer, an amendment of the qualification or a permanent transfer to the hosting employer may be options for consideration.**