

<b>Title</b>	<b>Demonstrate knowledge of safe working electrical practices for Electricity Supply Workers</b>		
<b>Level</b>	<b>2</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	<p>This unit standard meets the requirements of safe working practices for electricity supply workers as required by the Electrical Workers Registration Board for trainee limited certificate.</p> <p>People credited with this unit standard are able to demonstrate knowledge of: electrical test instruments suitable to measure an energised supply or conductors or insulation in an electricity environment; a method used to identify an energised electrical circuit and the procedures for disconnection and isolation of the energised electrical circuit; the hazardous nature of electricity and methods of applying personal protection to reduce exposure to electrical shock.</p>
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<b>Classification</b>	Electricity Supply > Electricity Supply - Core Skills
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable industry and legislative requirements.
- 2 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the current version of the Health and Safety at Work Act 2015; Electricity Act 1992; Electricity (Safety) Regulations 2010; and any subsequent amendments and replacements; Electricity supply industry codes of practice and documented enterprise procedures, including *Safety Manual – Electricity Industry (SM-EI) (2015)* available from [www.eea.co.nz](http://www.eea.co.nz), and AS/NZS 60479.1:2010 *Effects of current on human beings and livestock - General aspects*.
- 3 Definitions  
*Asset owner* refers to a participant who owns or operates assets used for generating or conveying electricity.  
*Industry requirements* include all asset owner requirements; manufacturers' specifications; and enterprise requirements which may include the documented workplace policies, procedures, specifications, business, and quality management requirements relevant to the workplace in which assessment is carried out.

The *prove-test-prove* method refers to proving the instrument before and after a test to ensure that it works properly and is particularly important when confirming electrical isolation.

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## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of electrical test instruments suitable to measure an energised supply or conductors or insulation in an electricity environment.

#### Performance criteria

1.1 Instruments used to take electrical measurements are explained in terms of their purpose and function.

Range may include but is not limited to – circuit voltage, conductor resistance, conductor insulation resistance; evidence of two is required.

1.2 Consequences of incorrect use of electrical test instruments are described.

Range may include but is not limited to – use of wrong instrument, incorrect connection to the circuit, incorrect range or function selected, risk of electric shock, arc flash, weather conditions; evidence of three is required.

1.3 The test-before-touch and the prove-test-prove methods for electrical measurement are explained.

1.4 Industry practice and safety procedure around taking measurements on energised circuits is explained.

### Outcome 2

Demonstrate knowledge of a method used to identify an energised electrical circuit and the procedures for disconnection and isolation of the energised electrical circuit.

#### Performance criteria

2.1 Method of identification of the energised circuit is explained.

2.2 Procedures for carrying out the de-energising of the circuit, safety tagging and locking off are explained.

### Outcome 3

Demonstrate knowledge of the hazardous nature of electricity and methods of applying personal protection to reduce exposure to electrical shock.

## Performance criteria

- 3.1 The nature of electric shock is explained in terms of how it may arise, its physiological effect on humans, and the effects of voltage and current on the human body as described by AS/NZS 60479.1:2010.
- 3.2 The danger of generated step and touch voltages in the electricity supply industry is explained.
- 3.3 The danger of working within minimum approach distances is explained.
- 3.4 The use of double insulation is described in terms of what it is and how it protects the user from electric shock.
- 3.5 Method of identification for double insulation from appliance nameplate is explained.
- 3.6 The principle of operation of an isolating transformer is explained in terms of how it can prevent electric shock.
- 3.7 The principle of operation of a residual current device (RCD) is explained in terms of how it can prevent electric shock.

<b>Planned review date</b>	31 December 2025
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## Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	15 August 2013	31 December 2020
Review	2	28 September 2017	31 December 2022
Review	3	27 August 2020	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0120
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

## Comments on this unit standard

Please contact Connexis - Infrastructure Industry Training Organisation [qualifications@connexis.org.nz](mailto:qualifications@connexis.org.nz) if you wish to suggest changes to the content of this unit standard.