

<b>Title</b>	<b>Plan, install, and test electrical installation wiring and equipment</b>		
<b>Level</b>	<b>5</b>	<b>Credits</b>	<b>15</b>

<b>Purpose</b>	<p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> <li>• plan for installation of electrical fittings, plant and equipment to electrical installations or works;</li> <li>• install and test temporary or fixed electrical wiring and electrical fittings to plant and equipment in electrical installations or works.</li> </ul> <p>This unit standard is intended for Electricity Supply Industry Power Technicians who hold higher academic qualifications such as degrees and diplomas in electrical engineering, who wish to obtain Electrical Workers Registration Board (EWRB) registration under the electrical engineer's class of registration.</p>
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<b>Classification</b>	Electricity Supply > Electricity Supply - Power System Maintenance
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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 legislative and industry requirements.
- 2 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to:
  - Electricity Act 1992
  - Electricity (Safety) Regulations 2010
  - Health and Safety at Work Act 2015
  - Electricity supply industry codes of practice and documented enterprise procedures including *Safety Manual – Electricity Industry (SM-EI)* and relevant EEA guides available at [www.eea.co.nz](http://www.eea.co.nz)
  - AS/NZS 3000:2018 *Electrical installations (known as the Australian/New Zealand Wiring Rules)*
  - AS/NZS 3760:2010 *In-service safety inspection and testing of electrical equipment*
  - Electrical Workers Registration Board, *Supervision Procedures for Trainees*, (2010) available at [EWRB - Publications](#)
 and all subsequent amendments and replacements.

- 3 Definitions  
*ELV* – extra low voltage.  
*LV* – low voltage.
  - 4 It is recommended that Unit 6401, *Provide first aid*; and Unit 6402, *Provide basic life support* be achieved, or equivalent knowledge and skills are demonstrated, prior to assessment of standard.
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## Outcomes and performance criteria

### Outcome 1

Plan for installation of electrical fittings, plant and equipment to electrical installations or works.

Range temporary or fixed electrical and control circuit installations.

#### Performance criteria

- 1.1 Specifications and installation drawings are interpreted before work commences.
- 1.2 Cable sizes and protection requirements are identified from equipment ratings and specifications.
- 1.3 Current regulations and standards, and industry guidelines applicable to the installation wiring and equipment are identified.
- 1.4 The installation and operating principles of the equipment being used in the installation are researched and understood.
- 1.5 Risk assessment, safety plan and work plan are completed prior to work being undertaken.

### Outcome 2

Install and test temporary or fixed electrical wiring and electrical fittings to plant and equipment in electrical installations or works.

Range two LV circuits and two ELV circuits, one of which must be a control circuit.

#### Performance criteria

- 2.1 Work and safety plan is implemented.
- 2.2 Electrical cables are installed, connected and terminated to fittings, plant and equipment in accordance with current regulations and standards.
- 2.3 Fittings and devices that may suffer damage due to test voltages are identified and methods to protect them from damage are demonstrated.

- 2.4 The electrical installation is inspected and tested for compliance with AS/NZS 3000.
- 2.5 Results are recorded in accordance with current regulations and standards.
- 2.6 Compliance and safety certificates are completed in accordance with current regulations and standards.

<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	20 July 2017	N/A
Rollover and Revision	2	2 March 2023	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 Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at [qualifications@WaihangaAraRau.nz](mailto:qualifications@WaihangaAraRau.nz) if you wish to suggest changes to the content of this unit standard.