

Title	Demonstrate knowledge of theory and legislation for registration of electrical appliance servicepersons (endorsed)		
Level	3	Credits	3

Purpose	<p>This unit standard covers the theory and legislation assessment required for registration as an Electrical Appliance Serviceperson (endorsed to disconnect and connect).</p> <p>People credited with this unit standard are able to demonstrate knowledge of:</p> <ul style="list-style-type: none"> – basic electrical theory, electrical circuits, power and energy, and electrical conductors and insulators; – flexible cords and flexible cables including termination methods; – the New Zealand electricity systems of supply and multiple earth neutral system; – electrical protection, personal electrical safety, personal protection devices, and isolating transformers; – the safety tagging system; – legislative requirements for workplace safety, and safe working practices for an Electrical Appliance Serviceperson (endorsed to disconnect and connect); – electrical testing and measuring instruments, electrical appliance testing, and electrical equipment and appliance commissioning and decommissioning; – single phase electric motors; and – damp situations and wet areas in terms of electrical safety requirements.
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Classification	Electrical Engineering > Electrical Standards and Statutes
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Available grade	Achieved
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Prerequisites	Unit 30645, <i>Demonstrate practical application of theory and legislation for electrical appliance servicepersons (endorsed)</i> ; Unit 30646, <i>Demonstrate knowledge of electrical theory and legislation for electrical appliance servicepersons (endorsed)</i> ; or demonstrate equivalent skills and knowledge.
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Guidance Information

1 This unit standard has been developed for learning and assessment off-job.

- 2 Under the Electricity Amendment Act 2006 the Electrical Workers Registration Board (EWRB) has a responsibility to set registration criteria for electrical workers and ensure that all persons applying for electrical registration are competent.
- 3 Learners and assessors should be aware that there is a legislative requirement that before people sit the EWRB examination and are awarded their licence, they must have had training in supervision of electrical workers. Supervision of electrical workers is prescribed electrical work (PEW), as defined in the Electricity Act 1992. Unit 27352, *Demonstrate knowledge of supervision of trainees undertaking prescribed electrical work* is a prerequisite for all electrical licensing examinations.
- 4 To be eligible for registration as electrical workers, candidates must complete a competency-based programme of learning approved by the EWRB and must pass the EWRB theory examination for the registration class, which is based on the requirements of the EWRB *Teaching guidelines* and resources available at EWRB - Publications for the registration class required. Electrical appliance servicepersons (endorsed) must also pass the EWRB Regulations examination. The EWRB Regulations examination is the only valid assessment tool for this unit standard, and credit for this unit standard may only be granted on evidence of passing the examination. The only references for this examination are the Electricity (Safety) Regulations 2010, and the EWRB *Teaching guidelines and resources*. The examination prescription and practical skill assessments prescribed in the EWRB *Teaching Guidelines for Electrical Appliance Serviceperson (endorsed to disconnect and connect)* are structured around the essential capabilities and critical items that are considered relevant to electrical appliance serviceperson (endorsed to disconnect and connect).
- 5 Examination results will be notified by the EWRB.
- 6 References
AS/NZS 3000:2007, *Electrical Installations (known as the Australian/New Zealand Wiring Rules)*;
Electricity (Safety) Regulations 2010;
Electricity Act 1992;
EWRB *Teaching guidelines and resources* available at [Teaching guidelines and resources | Electrical Workers Registration Board \(ewrb.govt.nz\)](http://ewrb.govt.nz);
EWRB *Teaching Guidelines for Electrical Appliance Serviceperson (endorsed to disconnect and connect)* available at [Teaching-Guidelines-for-Electrical-Appliance-Serviceperson-Endorsed-to-disconnect-and-connect-40-.pdf \(ewrb.govt.nz\)](http://ewrb.govt.nz);
New Zealand Electrical Codes of Practice (Ministry of Economic Development, ISSN 0114-0663);
and all subsequent amendments and replacements.
- 7 Range
 - a During assessment, candidates will need to refer to copies of the above.
 - b Material required for EWRB examinations is available at [Teaching guidelines and resources | Electrical Workers Registration Board \(ewrb.govt.nz\)](http://ewrb.govt.nz).
 - c All evidence presented for all of the outcomes and performance criteria in this unit standard must be in accordance with legislation, codes of practice, and Standards listed in Guidance Information note 5; with industry practice; and with the EWRB *Electrical Appliance Serviceperson (endorsed to disconnect and connect)*.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of basic electrical theory, electrical circuits, power and energy, and electrical conductors and insulators.

Performance criteria

- 1.1 Explain basic electrical theory, electrical circuits, power and energy, and electrical conductors and insulators.
- 1.2 Perform electrical calculations.

Outcome 2

Demonstrate knowledge of flexible cords and flexible cables including termination methods.

Performance criteria

- 2.1 Explain flexible cords and flexible cables.
Range differences between flexible cords and flexible cables.
- 2.2 Describe flexible cords and cables termination methods.

Outcome 3

Demonstrate knowledge of the New Zealand electricity systems of supply and multiple earth neutral system.

Performance criteria

- 3.1 Explain and reference New Zealand electricity systems of supply and multiple earth neutral system.

Outcome 4

Demonstrate knowledge of electrical protection, personal electrical safety, personal protection devices, and isolating transformers.

Performance criteria

- 4.1 Explain and reference electrical protection, personal electrical safety, personal protection devices, and isolating transformers.

Outcome 5

Demonstrate knowledge of the safety tagging system.

Performance criteria

- 5.1 Explain and reference the electrical safety tagging system.

Outcome 6

Demonstrate knowledge of legislative requirements for workplace safety, and safe working practices for an Electrical Appliance Serviceperson (endorsed to disconnect and connect).

Range provisions of the Act and regulations relating to – electrical safety, registration and licensing of an Electrical Appliance Serviceperson (endorsed to disconnect and connect), testing of prescribed electrical work, certification of prescribed electrical work, connection of prescribed electrical work.

Performance criteria

- 6.1 Explain and reference legislative requirements for workplace safety and safe working practices.

Outcome 7

Demonstrate knowledge of electrical testing and measuring instruments, electrical appliance testing, and electrical equipment and appliance commissioning and decommissioning.

Performance criteria

- 7.1 Explain and reference electrical testing and measuring instruments, and electrical appliance testing.
- 7.2 Explain and reference electrical equipment and appliance commissioning and decommissioning.
- 7.3 Explain and reference appliance tagging in accordance with compliance requirements.

Outcome 8

Demonstrate knowledge of single phase electric motors.

Performance criteria

- 8.1 Explain single phase electric motors.

Outcome 9

Demonstrate knowledge of damp situations and wet areas in terms of electrical safety requirements.

Performance criteria

- 9.1 Explain and reference damp situations and wet areas in terms of electrical safety requirements.

Planned review date	31 December 2027
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 June 2011	31 December 2022
Review	2	14 December 2017	31 December 2024
Review	3	2 March 2023	N/A

Consent and Moderation Requirements (CMR) reference	0003
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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 if you wish to suggest changes to the content of this unit standard.