

Title	Maintain an electrical system in a wind turbine		
Level	3	Credits	15

Purpose	People credited with this unit standard are able to: remove a wind turbine from service and isolate electrical systems; perform maintenance on the electrical system; and return the wind turbine to service.
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Classification	Electricity Supply > Electricity Supply - Power System Maintenance
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Available grade	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 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* (2015) available from www.eea.co.nz.
- 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 cover the documented workplace policies, procedures, specifications, business, and quality management requirements relevant to the workplace in which assessment is carried out.
Job instructions are instructions given to the operator prior to undertaking a job. They may include site safety instructions, contract drawings, and written memos.
- 4 Range
 Electrical systems include – generators, transformers, converters, and sensors. Evidence of maintenance on three separate electrical systems is required.

Outcomes and performance criteria

Outcome 1

Remove a wind turbine from service and isolate electrical systems.

Performance criteria

- 1.1 Personal protective equipment and tools specific to the system are selected.
- 1.2 Job instructions are confirmed against operating conditions.
- 1.3 Wind turbine is removed from service in a safe and controlled manner.
- 1.4 Electrical systems are isolated following electrical safe work procedures.

Outcome 2

Perform maintenance on the electrical system.

Performance criteria

- 2.1 Electrical systems in wind turbines are correctly identified and inspected for damage and wear.
- 2.2 Direct replacement of electrical components is performed.
 - Range may include – components in an electrical cabinet, single and three-phase wiring, single-phase components, three-phase motors; evidence is required for one component in an electrical cabinet, one single-phase component, and one three-phase component.
- 2.3 The system is tested for electrical safety and test results are recorded as required for Prescribed Electrical Work.
 - Range Electrical Safety Certificate, Certificate of Compliance.

Outcome 3

Return the wind turbine to service.

Performance criteria

- 3.1 Isolations are removed in a safe manner and electrical system is restored.
- 3.2 The wind turbine is returned to service.
- 3.3 Maintenance procedures are documented.

Planned review date	31 December 2026
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	29 April 2021	N/A

Consent and Moderation Requirements (CMR) reference

0101

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 if you wish to suggest changes to the content of this unit standard.