

Title	Operate electricity generation auxiliary plant and equipment		
Level	4	Credits	10

Purpose	People credited with this unit standard are able to: demonstrate knowledge of the function of generation auxiliary plant and equipment; operate generation auxiliary plant and equipment; and respond to abnormal events or deviations during thermal or hydro auxiliary plant and equipment operation.
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Classification	Electricity Supply > Electricity Supply - Core Skills
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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:
 - Health and Safety at Work Act 2015;
 - Electricity Act 1992;
 - Electricity (Safety) Regulations 2010;;
 - Electricity supply industry codes of practice and documented enterprise procedures, including *Safety Manual – Electricity Industry* (SM-EI) and relevant EEA guides available from www.eea.co.nz;
 - and any subsequent amendments and replacements.
- 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 and standards; 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.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the function of generation auxiliary plant and equipment.

Range includes but is not limited to – emergency generators, battery banks, air compressors, oil pumps, cooling water systems, air conditioning, drainage systems including oil and water separators, fire detection and protection equipment;
evidence of two different auxiliary plants and/or equipment is required.

Performance criteria

- 1.1 Selected auxiliary plant or equipment layout, function and operating parameters are explained.
- 1.2 Control system operation for each system is explained.
- 1.3 Interaction with other systems and the main plant is described.
- 1.4 The effect of the loss of the auxiliary systems on the main plant operation is described.

Outcome 2

Operate generation auxiliary plant and equipment.

Range may include but is not limited to – emergency generators, battery banks, air compressors, oil pumps, cooling water systems, domestic water, air conditioning, common gas systems, chemical systems, drainage systems including oil and water separators, fire detection and protection equipment;
operation includes but is not limited to – start, stop, changeover, routine testing, reporting.

Performance criteria

- 2.1 Plant operating procedures are located and followed for the duration of the operations.
- 2.2 Plant and equipment to be operated are identified using local plant labelling.
- 2.3 Operating decisions are determined in accordance with plant status and operating requirements.

Range plant availability, upstream and downstream effects, resource consents, plant limitations.
- 2.4 Plant and equipment are operated in sequence and within defined plant capabilities.

2.5 Plant and equipment is monitored during operation.

Range may include but is not limited to – status, indications, alarms, defects.

2.6 Operations are reported and recorded.

Outcome 3

Respond to abnormal events or deviations during thermal or hydro auxiliary plant and equipment operation.

Range may include but is not limited to – emergency operations, plant or equipment trip, deviations from designed operating parameters, alarms, protection events; evidence can be gathered from operator plant simulators.

Performance criteria

3.1 Process is stabilised.

Range plant and equipment made safe, alarms acknowledged and reset, protection reset, communications completed.

3.2 The cause of the event or deviation is identified using available resources.

Range distributed control system (DCS) data records, protection records, event lists, alarm lists.

3.3 Recording and reporting of the event or deviation is carried out.

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	16 March 2017	31 December 2023
Review	2	30 September 2021	N/A

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