

<b>Title</b>	<b>Operate distribution network auxiliary plant and equipment</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	People credited with this unit standard are able to: demonstrate knowledge of the function of distribution network auxiliary plant and equipment; operate distribution network auxiliary plant and equipment; and respond to abnormal events or deviations during distribution network auxiliary plant and equipment operation.
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<b>Classification</b>	Electricity Supply > Electricity Supply - Distribution Networks
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<b>Available grade</b>	Achieved
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### Guidance information

- 1 This unit standard can be assessed against in a workplace environment, or in a training or educational environment if simulated and realistic examples are able to be provided, or in a combination of both environments.
- 2 Performance and work practices in relation to the outcomes and performance criteria must comply with:
  - all current legislation, especially the Electricity Act 1992 and any subsequent amendments, as well as any regulations, codes of practice recognised under that statute;
  - Health and Safety at Work Act 2015, Resource Management Act 1991; and any subsequent amendments;
  - electricity supply industry codes of practice and documented enterprise procedures. These include updated versions of *Safety Manual – Electricity Industry* (SM-EI) Wellington: Electricity Engineers' Association available from <https://www.eea.co.nz/>.

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### Outcomes and performance criteria

#### Outcome 1

Demonstrate knowledge of the function of distribution network auxiliary plant and equipment.

Range may include but is not limited to – emergency generators, battery banks, Uninterruptible Power Supply UPS systems, air compressors, oil pumps, reactors, fire detection and security or surveillance protection equipment or systems;  
evidence of two different auxiliary plants 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 of auxiliary plant or equipment 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 distribution network auxiliary plant and equipment.

Range plant and equipment may include but is not limited to – emergency generators, battery banks, UPS systems, air compressors, oil pumps, fire detection and security or surveillance protection equipment or systems;  
operation may include but is not limited to – start, stop, changeover, routine testing, isolation and restoration, control, indication and monitoring, reporting;  
evidence of operating two different auxiliary plants or equipment is required.

**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.
- 2.3 Plant and equipment are operated in sequence and in accordance with workplace procedures within defined plant capabilities.
- 2.4 Plant and equipment is monitored during operation.  
  
Range includes but is not limited to – status, indications, alarms, defects, recording requirements met.
- 2.5 Operations are reported and recorded in accordance with organisational requirements.

**Outcome 3**

Respond to abnormal events or deviations during distribution network 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 of response to two different abnormal events or deviations is required.

**Performance criteria**

3.1 System 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 data records, protection records, events lists, alarm lists.

3.3 Recording and reporting of the event or deviation is carried out in accordance with organisational requirements.

<b>Planned review date</b>	31 December 2023
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	26 July 2018	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 the Infrastructure ITO (Connexis) [qualifications@connexis.org.nz](mailto:qualifications@connexis.org.nz) if you wish to suggest changes to the content of this unit standard.