

<b>Title</b>	<b>Operate industrial high voltage distribution systems</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>3</b>

<b>Purpose</b>	People credited with this unit standard are able to: <ul style="list-style-type: none"> <li>– identify and describe industrial high voltage (HV) distribution systems;</li> <li>– carry out switching, isolation, and earthing procedures; and</li> <li>– carry out re-commissioning procedures.</li> </ul>
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<b>Classification</b>	Electrical Engineering > Electrical Installation and Maintenance
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 This unit standard has been developed for learning and assessment on-job.
- 2 Achievement of this unit standard does not by itself imply that trainees may legally perform prescribed electrical work in their own right. Until they are registered and licensed under the Electricity Act 1992, trainees are assisting, and must work under the supervision of a Supervisor of Electrical Work when carrying out prescribed electrical work. If the prescribed electrical work in question is carried out for reward the Supervisor of Electrical Work must hold a valid practising licence.
- 3 References  
 Electricity Act 1992;  
 Electricity (Safety) Regulations 2010;  
 Health and Safety at Work Act 2015;  
 AS/NZS 3000:2018, *Electrical installations (known as the Australian/New Zealand Wiring Rules)* including Amendment 1;  
 and all subsequent amendments and replacements.
- 4 Definitions  
 The term *current regulations and standards* is used in this unit standard to refer to the requirements of the above references.  
*Safety rules* are described in the *Safety Rules Electricity Industry*.
- 5 Range  
 Demonstration of *safe working practices* and observance of *safety rules* are essential components of assessment of this unit standard.

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## Outcomes and performance criteria

### Outcome 1

Identify and describe industrial high voltage (HV) distribution systems.

#### Performance criteria

- 1.1 Diagrams are used to identify a distribution system layout.
- Range block diagrams, power system diagrams, location diagrams, distribution diagrams, connection diagrams.
- 1.2 The industrial high voltage distribution system layout is described using a labelled diagram.
- Range incoming supply, transformers, isolators, circuit breakers, main switchboard, metering and protection facilities, sub-mains, distribution boards and sub-circuits.
- 1.3 High voltage distribution components are identified and described in terms of their function and principle of operation.
- Range incoming supply, transformers, isolators, circuit breakers, main switchboard, metering and protection facilities, sub-mains, distribution boards, sub-circuits.

### Outcome 2

Carry out switching, isolation, and earthing procedures.

#### Performance criteria

- 2.1 Switching schedule is prepared, and relevant permits obtained, in accordance with industry standards.
- 2.2 Switching schedule is carried out in accordance with industry standards.
- 2.3 Isolation is determined using industry standard methods and procedures.
- 2.4 Safeguards are installed in accordance with current regulations and standards, and industry standards.
- Range barriers, temporary earths, warning notices, safety locks and safety instruction notices.
- 2.5 Communication of safety requirements with personnel, relating to isolated equipment and isolation procedures, is demonstrated.

### Outcome 3

Carry out re-commissioning procedures.

**Performance criteria**

- 3.1 Clearance or permission to work is returned to the operator.
- 3.2 Testing is carried out using industry standard methods and procedures.  
Range visual checks, safeguards removed, personnel communication.
- 3.3 Switching schedule is carried out in accordance with industry standards.
- 3.4 Documentation is completed in accordance with current regulations and standards, and industry requirements.

<b>Planned review date</b>	31 December 2022
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	30 April 1997	31 December 2013
Revision	2	3 April 2001	31 December 2013
Review	3	26 May 2005	N/A
Rollover and Revision	4	15 March 2012	N/A
Revision	5	15 January 2014	N/A
Rollover and Revision	6	28 January 2021	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	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 The Skills Organisation [reviewcomments@skills.org.nz](mailto:reviewcomments@skills.org.nz) if you wish to suggest changes to the content of this unit standard.