Title | Operate industrial high voltage distribution systems
---|---
Level | 4
Credits | 3

### Purpose
People credited with this unit standard are able to:
- describe industrial high voltage (HV) distribution systems;
- carry out switching, isolation, and earthing procedures;
and
- carry out re-commissioning procedures.

### Classification
Electrical Engineering > Electrical Installation and Maintenance

### Available grade
Achieved

### Explanatory notes
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 in Employment Act 1992;
   - AS/NZS 3000:2007, *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.
Outcomes and evidence requirements

Outcome 1

Describe industrial high voltage (HV) distribution systems.

Evidence requirements

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.

Evidence requirements

2.1 Switching schedule is prepared, and relevant permits obtained, in accordance with company and/or industry standards.

2.2 Switching schedule is carried out in accordance with company and/or 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.

Evidence requirements

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 company and/or industry requirements.

3.4 Documentation is completed in accordance with current regulations and standards, and industry requirements.

Planned review date 31 December 2014

Status information and last date for assessment for superseded versions

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Consent and Moderation Requirements (CMR) reference 0003


Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.
Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact The Skills Organisation reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.