



Australian Government

UEPOPS043 Interpret and analyse multi-operation protection devices

Release: 1

UEPOPS043 Interpret and analyse multi-operation protection devices

Modification History

Release 1. This is the first release of this unit of competency in the UEP Electricity Supply Industry - Generation Sector Training Package Release 2.0.

Application

This unit involves the skills and knowledge required to interpret and analyse multi-operation high voltage (H.V.) protection devices.

Power protection schemes aim to keep the power system stable by isolating only faulty plant or equipment to ensure the network is operational. The devices that are used to protect the power system are called protection devices.

Competency in this unit requires the ability to respond to a protection operation, interpret and determine cause of protection operation, restore protection and complete documentation. Individuals will, in general, work under supervision, in a power generation facility as an operator.

Power generation plant operators are trained and authorised to isolate, prepare plant and issue permits to work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

UEPOPS001 Analyse single operation protection devices

Competency Field

Operations

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Respond to multi-operation protection

- 1.1** Protection operation is confirmed, and multi-operation protection devices are identified for use in accordance with workplace procedures
- 1.2** Work health and safety (WHS)/occupational health and safety (OHS) regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, environmental requirements and workplace procedures are identified, applied and monitored
- 1.3** Apparatus affected is identified in accordance with workplace procedures
- 1.4** Targets, flags and alarms are identified and recorded in accordance with workplace procedures
- 1.5** Stakeholders are advised in accordance with workplace procedures

2 Interpret and determine cause of multi-operation protection

- 2.1** Information to external stakeholders is recorded in accordance with workplace procedures
- 2.2** Information for internal use on use of multi-operation protection devices is collated and assessed in accordance with workplace procedures
- 2.3** Sequence of events prior to and following recognition of fault and use of multi-operation protection devices are identified and assessed in accordance with workplace procedures
- 2.4** Multi-operation protection devices are assessed and evaluated in accordance with workplace procedures
- 2.5** Findings from assessment of multi-operation devices are analysed to determine probable cause of fault in accordance with workplace procedures

3 Restore protection

- 3.1** Stakeholders are informed of analysis findings and plan of action in accordance with workplace procedures
- 3.2** Multi-operation protection device indicators are reset in accordance with workplace procedures

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|---------------------------------|------------|---|
| | 3.3 | Corrective action is taken in relation to identified fault in accordance with workplace procedures |
| 4 Complete documentation | 4.1 | Records are maintained and all use of multi-operation protection devices are documented in accordance with workplace procedures |
| | 4.2 | Reports are forwarded to authorised personnel in accordance with workplace procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEP Electricity Supply Industry - Generation Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPOPS426 Interpret and analyse multi-operation protection devices.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>

Assessment Requirements for UEPOPS043 Interpret and analyse multi-operation protection devices

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least two separate occasions and include:

- applying work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - emergency procedures
 - risk control measures
 - safe working practices
- communicating with stakeholders
- completing documentation
- determining cause of multi-operation protection device operation using diagnostic techniques
- evaluating protection multi-operation protection device operation and determining response
- identifying power generation plant status
- implementing regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- interpreting manuals
- recognising abnormal power generation plant, system and equipment operating conditions
- responding to multi-operation protection device operation using data analysis techniques and tools
- restoring power system through use of multi-operation protection devices
- using corrective actions.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- arrangements of power production plant
- interpreting and determining cause of faults in power generation system
- manuals
- multi-operation protection devices and schemes
- multi-operation protection devices operation

- power generation plant and equipment, location and operating parameters
- power generation plant status
- regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- restoring protection to power generation system
- WHS/OHS legislated requirements, including:
 - emergency procedures
 - risk control measures
 - safe working practices
- workplace documentation
- workplace policies and procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

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