



Australian Government

UEPOPS426 Interpret and analyse multi-operation protection devices

Release: 1

UEPOPS426 Interpret and analyse multi-operation protection devices

Modification History

Release 1. This is the first release of this unit of competency in the UEP Generation Training Package.

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, whilst leaving as much of the network as possible in operation. 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 typically 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.

Note: Workplace practice

The application of the skills and knowledge described in this unit may require a licence or training permit to practice in the workplace where work is carried out on gas and electrical installations. Additional conditions may apply under state and territory legislative and regulatory licensing requirements.

Pre-requisite Unit

UEPOPS342 Interpret and analyse single operation protection devices

Competency Field

Operations

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

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 Apparatus affected is identified, in accordance with workplace procedures
- 1.3 Targets, flags and alarms are identified and recorded, in accordance with workplace procedures
- 1.4 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 Multiple-operation protection devices are assessed and evaluated, in accordance with workplace procedures
- 2.5 Findings from assessment of multi-operation devices are analysed, in accordance with workplace procedures, to determine most probable cause of fault

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
- 3.3 Corrective action is taken, in accordance with workplace procedures, in relation to identified fault

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 Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPOPS426B 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 UEPOPS426 Interpret and analyse multi-operation protection devices

Modification History

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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, performance criteria and range of conditions on at least two separate occasions and includes:

- 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 legislation, industry standards, codes of practice and regulations
- interpreting manufacturers' specifications and 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 appropriate corrective actions

Knowledge Evidence

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

- interpreting and determining cause of faults in power generation system
- legislation, industry standards, codes of practice and regulations
- manufacturers' specifications and manuals
- multi-operation protection devices and schemes
- multi-operation protection devices operation

- power generation plant and equipment, its location and operating parameters
- power generation plant status
- restoring protection to power generation system
- typical arrangements of power production plant
- WHS/OHS legislated requirements including:
 - emergency procedures
 - risk control measures
 - safe working practices
- workplace documentation
- workplace policies and procedures

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

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 currently used in industry
- applicable documentation including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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