



**Australian Government**

# **UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents**

**Release: 1**

# **UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents**

## **Modification History**

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package Release 4.0.

## **Application**

This unit includes the skills and knowledge required to develop secondary protection and control scheme isolation documents for the electricity supply industry (ESI).

This includes the preparation to develop secondary isolation and restoration documents and a thorough understanding of secondary protection and control schemes.

The application of the skills and knowledge described in this unit may require a licence/registration to practice in the workplace.

Other conditions may also apply under state and territory legislative and regulatory licensing requirements which must be confirmed prior to commencing this unit.

## **Pre-requisite Unit**

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in single path circuits

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEEEL0020 Solve problems in low voltage a.c. circuits

UEEEL0021 Solve problems in magnetic and electromagnetic devices

UETDREL005 Work safely in the vicinity of live electrical apparatus

## **Competency Field**

Testing

## **Unit Sector**

Not applicable.

## 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 Prepare to develop secondary protection and control scheme isolation and restoration instructional documents**

- 1.1** Workplace organisational requirements for the development of secondary isolation instructional documents, are obtained and reviewed
- 1.2** Purpose of the development of secondary isolation and restoration instructional documents is established
- 1.3** Testing procedures are discussed and reviewed with appropriate personnel
- 1.4** Tools, equipment, personal protective equipment (PPE) and work permits required for secondary isolation instructional documents are determined
- 1.5** Relevant stakeholders are identified and liaised with

#### **2 Develop secondary protection and control scheme isolation and restoration instructional documents**

- 2.1** Work tasks and sequence of isolation and restoration is determined
- 2.2** Hazards are identified, risks assessed, and control measures identified and applied
- 2.3** Secondary isolation and restoration instructional documents are developed in accordance with workplace requirements
- 2.4** Quality checks of work are undertaken in accordance with workplace requirements

#### **3 Complete work and documentation**

- 3.1** Completed work is checked for compliance against the workplace requirements
- 3.2** Secondary isolation and restoration instructional documents are completed, and appropriate personnel notified in accordance with workplace requirements

## **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 UET Transmission, Distribution and Rail Sector Training Package Companion Volume Implementation Guide.

## **Unit Mapping Information**

This unit replaces and is not equivalent to UETDRTS010 Develop power systems secondary isolation instructional documents.

## **Links**

Companion Volume Implementation Guides are found in VETNet -  
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>

# **Assessment Requirements for UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents**

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## **Performance Evidence**

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least two (2) separate occasions and include:

- determining the preparation required for the secondary isolation and restoration instructional documents including:
  - applicable workplace organisational procedures
  - testing procedures
  - tools, equipment, personal protective equipment (PPE) and work permits
  - relevant stakeholders
- establishing the purpose of the secondary isolation and restoration instructional documents
- developing secondary isolation and restoration instructional documents for at least two (2) of the following substation equipment:
  - bus protection
  - feeder/line protection
  - transformer protection
  - earth fault protection
  - backup protection
  - pilot wire/differential protection
- applying the following when developing secondary isolation and restoration instructional documents:
  - work tasks and sequence of isolation and restoration
  - hazard assessment and control measures
  - consideration of network stability
- notifying appropriate personnel of the completed secondary isolation and restoration instructional documents.

## **Knowledge Evidence**

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of

the requirements of the elements and performance criteria and include knowledge of:

- permit types and application for secondary equipment
- system diagrams/plans and drawings, manufacturer manuals
- electrical equipment fundamentals including:
  - safety precautions with regard to using electrical equipment
  - techniques in pre-use inspection on the serviceability of electrical equipment
  - techniques in the general maintenance, care and storage of electrical equipment
  - identifying hazards, assessing and controlling risks associated with the use of electrical equipment
- processes for developing secondary isolation and restoration instructional documents including:
  - secondary isolation and restoration principles
  - correct sequence of isolation and restoration
  - stakeholder engagement
  - adequate protection remains in service to provide plant protection
  - instruction preparation
  - network stability
  - remote control systems
- protection schemes including:
  - codes, supply authority regulations and organisational requirements
  - types of protection schemes, reasons for use, application of protection zones around system elements and degree of protection.

## 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 conditions involving realistic and authentic activities that replicate operational 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:

- applicable documentation, including workplace requirements, supply authority regulations, codes and operation manuals.

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