



**Australian Government**

# **Assessment Requirements for UETDRSB002 Commission and maintain discrete control and protection systems**

**Release: 1**

# Assessment Requirements for UETDRSB002 Commission and maintain discrete control and protection systems

## 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.

## 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:

- applying relevant legislation, regulations, standards, codes of practice and organisational workplace requirements including:
  - work health and safety (WHS)/occupational health and safety (OHS) requirements
- identifying hazards, assessing risks, and identifying, applying and monitoring control measures
- obtaining, inspecting and using relevant personal protective equipment (PPE)
- dealing with an unplanned event on at least one (1) occasion
- obtaining and signing relevant work permits in accordance with workplace requirements
- completing relevant work records, reports and documentation
- confirming pre-commission testing
- undertaking functional checks and testing, including all of the following:
  - isolating protection
  - direct current (d.c.) relay supply
  - controls, indicators and alarms
  - overcurrent
  - earth fault
  - trip and control circuits
  - relay settings
- maintaining at least three (3) of the following protection devices:
  - parallel operation
  - thermal overloads
  - voltage regulation
  - overcurrent
  - earth fault
  - automatic changeover
  - auto-reclose
  - buchholz relay

- cooling controls
- d.c. relay supply
- frame leakage
- neutral displacement
- parallel operation
- thermal overloads
- transformer temperature control devices
- commissioning at least three (3) of the following protection devices:
  - parallel operation
  - thermal overloads
  - voltage regulation
  - overcurrent
  - earth fault
  - automatic changeover
  - auto-reclose
  - buchholz relay
  - cooling controls
  - d.c. relay supply
  - frame leakage
  - neutral displacement
  - parallel operation
  - thermal overloads
  - transformer temperature control devices.

## 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:

- relevant legislation, regulations, standards, codes of practice and organisational workplace requirements including WHS/OHS requirements
- hazard, risk assessment and risk control requirements, including potential hazards
- types and application of PPE
- safe use of plant, tools and equipment
- application, purpose and types of permits and access authorities
- procedures for identifying and responding to an unplanned event
- workplace records, reports and documentation
- evaluation of equipment serviceability
- identification and procurement of materials and apparatus
- electrical equipment associated with protection and control schemes including:
  - types and applications

- characteristics and capabilities
- testing techniques and procedures
- types and applications of test equipment
- operation and maintenance procedures for protection devices
- relay manufacturer specifications, types, function and characteristics
- operation and maintenance procedures associated with voltage regulation schemes
- circuit breaker auxiliary systems
- detailed operation and setting of protection and control schemes
- location and rectification of faults in low voltage (LV) electrical equipment
- principles and procedures for isolation and tagging
- commissioning and maintenance procedures, including:
  - compliance with workplace requirements
  - system diagrams, drawings and operating manuals
  - close out requirements.

## 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:

- relevant and appropriate materials, tools, equipment and PPE currently used in industry
- applicable documentation, including workplace requirements, equipment specifications, regulations, codes of practice and operation manuals.

## Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>