



**Australian Government**

# **Assessment Requirements for UETDRIS008 Install and maintain electrical apparatus**

**Release: 1**

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## 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 2.0.

## 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 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)
- identifying hazards, assessing risks, identifying, applying and monitoring control measures
- obtaining, inspecting and using relevant personal protective equipment (PPE)
- connecting and terminating conductors and cables in accordance with workplace requirements
- installing and maintaining electrical apparatus for at least one (1) of the following:
  - transformers
  - reactors
  - regulators
  - capacitors
- installing and maintaining electrical switching apparatus, including least one (1) of the following:
  - reclosers
  - motorised switch
  - gas-filled switch
  - oil-filled switch
  - air-break switch
  - vacuum switch
- installing and maintaining electrical apparatus for at least three (3) of the following:
  - fuse switches
  - sectionalisers
  - dropout fuses
  - disconnectors
  - links
  - fuses

- surge arrestors
- line fault indicators
- conducting at least five (5) of the following tests:
  - voltage
  - phasing
  - current
  - insulation resistance
  - neutral identification
  - polarity
  - phase rotation
  - loop impedance
  - earth resistance
- dealing with an unplanned event on at least one (1) occasion
- recording test results in accordance with workplace requirements
- obtaining and signing on and off relevant work permits in accordance with workplace requirements
- completing relevant work records, reports and documentation.

## 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
- hazard, risk assessment and risk control requirements, including potential hazards
- types and application of PPE
- safe use of plant and equipment
- application, purpose and types of work permits
- events constituting an unplanned event or incident
- procedures for responding to an unplanned event or incident
- construction manuals, system diagrams/plans and drawings
- characteristics of a transformer, including:
  - basic construction of distribution transformers
  - operation under load/no-load conditions
  - types and basic operation of tap changing switches
  - efficiency and cooling
- installation and maintenance of a transformer, including:
  - basic connections
  - restrictions to parallel operation
  - testing

- fault-finding procedures
- earthing types and configurations
- types and function of electrical apparatus, including:
  - reactors
  - regulators
  - capacitors
  - surge arrestors
  - fault indicators
- types and function of various switchgear/protection apparatus, including:
  - isolators
  - air-break
  - gas-filled
  - oil-filled
  - vacuum type
  - links
  - fuses
  - sectionalisers
  - reclosers
  - operating characteristics
  - advantages and disadvantages of different types of switchgear
  - earthing functions
- installation and maintenance procedures for electrical apparatus
- procedures for diagnosing and rectifying faults
- procedures for testing and commissioning 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 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.

Evidence should show demonstrated competency working at heights, in limited spaces, with different structural/construction types and method and in a variety of environments.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, facilities, equipment and PPE currently used in industry for installing and maintaining electrical apparatus
- applicable documentation, including workplace requirements, relevant industry standards, 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>