



**Australian Government**

# **Assessment Requirements for UETDRIS011 Install and maintain low voltage underground services**

**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)
- determining communication method with safety observer
- confirming safety observer is in position in accordance with workplace requirements
- applying energised/live low voltage (LV) working requirements and procedures in accordance with workplace requirements
- connecting LV underground services to at least two (2) of the following:
  - underground pillar/pit connection (single phase)
  - underground pillar/pit connection (three phase)
  - underground to overhead connection
- using the following specialised energised LV equipment:
  - insulating mats/covers
  - insulating gloves
- testing of LV underground service connections, including at least four (4) of the following tests:
  - polarity\*
  - neutral integrity\*
  - phase rotation
  - continuity
  - voltage
  - insulation resistance
  - (\* must do)
- dealing with an unplanned event on at least one (1) occasion
- 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, tools and equipment
- safety observer:
  - role and responsibilities
  - communication methods
- events constituting an unplanned event or incident
- procedures for responding to an unplanned event or incident
- requirements for the use of workplace construction manuals, system diagrams/plans and drawings, including:
  - types of LV underground services
  - methods of construction and installation
  - minimum depths for underground services to be buried and proximity to other assets and structures
- materials for underground service installation
- methods of laying underground service cables
- characteristics and applications of different types of cables
- diagnosis and repair of faults
- jointing and terminating methods in a:
  - fuse box
  - pillar and pit
  - customer installation
- testing and commissioning underground services, including:
  - pre-energising tests - insulation resistance and continuity test
  - inspection
  - test equipment functionality and interpretation
  - polarity, voltage and phase sequence tests
  - neutral and phase identification tests
  - neutral integrity tests
  - recording results
- connection principles, including:
  - energised/live work requirements and procedures
  - purpose and function of multiple earth neutral (MEN) system
  - types of connection faults

- causes and effects of incorrect and poor electrical connections
- principles of loop impedance
- reasons for and methods used to maintain standard phase sequencing
- purpose and operation of service fusing
- use of independent earth for testing.

## 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, facilities, equipment and PPE currently used in industry for installing and maintaining LV underground services
- 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>