



**Australian Government**

# **Assessment Requirements for UETDRTO011 Maintain energised transmission lines using live work barehand techniques**

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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)
  - minimum approach distances
- identifying hazards, assessing risks, identifying, applying and monitoring control measures
- obtaining, inspecting and using relevant personal protective equipment (PPE)
- inspecting, fitting and testing conductive suit
- obtaining and signing on and off relevant work permits in accordance with workplace requirements
- determining communication method with safety observer
- confirming safety observer is in position in accordance with workplace requirements
- calculating conductor load
- accessing work zone using at least two (2) of the following methods:
  - insulated ladder
  - elevated work platform (EWP)
  - elevated work box (EWB)
  - rope
- confirming the electrical integrity of insulators
- completing at least three (3) of the following tasks using live work barehand techniques:
  - replacing strain insulators\*
  - replacing/connecting bridge/bonding connections\*
  - replacing suspension insulators
  - replacing vibration dampers
  - repairing/replacing conductor spacers
  - repairing/replacing conductor joints
  - repairing conductors
  - (\*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
  - minimum approach distances
  - working on energised lines utilising live work barehand techniques
  - emergency response and rescue procedures
- 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
- events constituting an unplanned event or incident
- procedures for responding to an unplanned event or incident
- safety observer:
  - role and responsibilities
  - communication methods
- roles and responsibilities of team members
- calculation of forces supported by live working equipment
- electrical and electrostatic principles, including:
  - relationship of the resistance of a human body to different levels of current and voltage
  - relationship of a human body to an electric field
  - effects of electrostatic induction
  - relationship of phase voltage and respective line voltages
  - effect of distance
  - potential of an object within the field and the effect of distances to the potential
  - Faraday's cage - effects of a body, advantages, description of the Faraday's cage used by bare hand live-line workers
  - lightning and switching surges
- application and function of extra-high voltage (EHV) auto-reclosing suppression
- testing, types, selection, maintenance and storage of specialised equipment:
  - conductive suit
  - insulated boom EWP
  - plant and tools
  - PPE
  - ropes

- sticks
- live work barehand techniques for maintaining energised transmission lines in accordance with workplace requirements
- electrical integrity of insulators, including:
  - visual and audible assessment
  - disc voltage difference
  - condition of insulator string.

## 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:

- materials, tools, equipment and PPE currently used for maintaining energised transmission lines using live work barehand techniques
- 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>