



Australian Government

**Assessment Requirements for
UETTD RTP32 Maintain energised
transmission lines using high voltage live
work bare hand method**

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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.

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 work health and safety (WHS)/occupational health and safety (OHS) requirements, including the use of risk control measures
- applying sustainable energy principles and practices
- accessing work zone using at least one (1) of the following methods:
 - ladder access
 - elevated work platform (EWP) access
 - elevated work box (EWB) access
 - rope access
- performing at least five (5) of the following live work tasks:
 - replacing strain insulators
 - replacing suspension insulators
 - replacing/connecting bridge/bonding connections
 - replacing vibration dampers
 - repairing/replacing conductor spacers
 - repairing/replacing conductor joints
 - repairing conductors
- dealing with unplanned events on at least one (1) occasion.

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:

- Commonwealth/state/territory legislation, standards, codes, supply authority regulations and/or enterprise requirements associated with working on energised lines for voltages up to and including 500 kV utilising the live bare hand work method
- relationship and responsibilities of each team member, including:
 - role of the individual in the team

- contribution to joint outcomes
- goals/plans and objectives of the team
- work team communication
- effective teamwork
- safety precautions for working on energised lines, including:
 - live work minimum approach distances for persons and plant
 - calculation of forces supported by live working equipment
 - identification of WHS/OHS hazards, and assessing and controlling the risks
 - types, selection, maintenance, storage and uses of personnel protective equipment (PPE), including the faraday suit
 - types and functions, safe working policies, procedures and practices for use of specialised live work plant, equipment and tools
 - emergency response and rescue procedures
- 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 in an electric field
 - effects of electrostatic induction for live bare hand work
 - relationship of phase voltage and respective line voltages
 - effect of distance to voltage
 - potential of a conductive object within a field
- high voltage (HV) feeder auto-reclosing suppression, including:
 - function
 - application
 - live work access authority/permit systems
- live bare hand work techniques performed in accordance with enterprise requirements, including:
 - fitting and testing a faraday suit
 - erecting and using an insulated ladder
 - erecting and using a boom pole and insulator cradle
 - installing and/or replacing HV suspension insulators
 - installing and/or replacing HV strain insulators
 - installing and/or replacing suspension clamp units
 - installing and/or replacing fittings and hardware to conductors
 - installing and/or replacing vibration dampers
 - installing and/or replacing conductor spacers
 - installing and/or replacing preformed repair rods
 - installing and/or replacing HV cross-arms
 - connecting and/or disconnecting HV bypass bridges
- selection, care, use and maintenance of ropes for live work, including:
 - identification of ropes used for live bare hand work

- characteristics
- application
- restrictions
- precautions
- storage
- transport
- cleaning and caring
- labelling
- testing
- records
- techniques in splicing
- determining suitability of the rope for continued use
- selection care, use and maintenance of sticks for live work, including:
 - care of live work sticks
 - use and load limitations of live work sticks
 - cleaning live work sticks
 - restoring gloss surfaces of live work sticks
 - repairing small ruptures of live work sticks
 - repairing broken fittings of live work sticks
- checking integrity of insulators prior to work, including:
 - visual and audible assessment
 - check disc voltage difference
 - plot data
 - assess data
 - determine condition of insulator string
- rigging procedures for live bare hand work, including
 - identification of rigging points on structures
 - selection and positioning of rigging equipment on structures
 - selection of and operation of rope tackles
- safety observer principles and responsibilities, including:
 - areas of responsibility
 - supervisor skills
 - protocols and procedures
 - specific duties of a safety observer
 - techniques in observing others in the safe performance of their work
 - minimum approach distances for personnel and hand-held tools
 - special limits of approach.

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:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and PPE currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

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