



Australian Government

UETTD RTP30 Inspect transmission overhead structures and electrical apparatus

Release: 1

UETTD RTP30 Inspect transmission overhead structures and electrical apparatus

Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package.

Application

This unit covers the inspection requirements of overhead structures, such as towers and electrical apparatus. Overhead structures include towers and overhead conductors and/or cables, including underground and overhead transition points, electrical equipment, hardware and/or earthing systems. It also includes the completion of inspection reports and other relevant documentation in accordance with requirements.

The application of the skills and knowledge described in this unit may require a licence/registration to practice in the workplace subject to regulations for undertaking of electrical work.

Other conditions may apply under state and territory legislative and regulatory licencing requirements which must be confirmed prior to commencing this unit.

Pre-requisite Unit

Common Unit Group

UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace

UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications

UETTDREL11 Apply sustainable energy and environmental procedures

UETTDREL16 Working safely near live electrical apparatus

Competency Field

Transmission

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for the inspection of overhead structures and electrical apparatus used on towers

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** Work schedules, including drawings, plans, requirements, established procedures and material lists, are received, analysed and confirmed, as necessary, by site inspection
- 1.2** Relevant requirements and established procedures for the work are communicated to all personnel and identified for all worksites
- 1.3** Work health and safety (WHS)/occupational health and safety (OHS) policies and procedures related to requirements and established procedures for the inspection of overhead structures and electrical apparatus used on towers are obtained and understood for the purposes of the work to be performed
- 1.4** Work is prioritised and sequenced following consultation with others for completion within acceptable timeframes and in accordance with established procedures
- 1.5** Hazards are identified, WHS/OHS risks assessed and control measures prioritised, implemented and monitored, including emergency exits kept clear, according to established procedures
- 1.6** Relevant work permits are obtained to access and perform work according to requirements and/or established procedures
- 1.7** Resources, including personnel, equipment, tools and personal protective equipment (PPE), required for the job are identified, scheduled and obtained and confirmed safe and in working order
- 1.8** Relevant personnel at worksite are confirmed current in first aid, tower/pole top rescue and other related work procedures according to requirements
- 1.9** Liaison and communication issues with others/authorised personnel, authorities, clients and land owners are resolved to carry out work

- 1.10** Site is prepared according to the work schedule and to minimise risk and damage to property, commerce and individuals in accordance with established procedures
 - 1.11** Personnel participating in the work, including plant operators and contractors, are fully briefed and respective responsibilities confirmed, where applicable, in accordance with established procedures
 - 1.12** Traffic management plan is identified and implemented
- 2 Carry out inspection of overhead structures and electrical apparatus used on towers**
 - 2.1** WHS/OHS and sustainable energy principles and practices to reduce the incidents of accidents and minimise waste are monitored and followed in accordance with requirements and/or established procedures
 - 2.2** Lifting, climbing, working in confined spaces and aloft, and use of power tools/equipment, techniques and practices are safely followed and currency according to requirements confirmed
 - 2.3** Essential knowledge and associated skills are applied in the safe inspection of overhead structures and electrical apparatus used on towers to ensure completion in an agreed timeframe and to quality standards with a minimum of waste according to requirements
 - 2.4** Inspection of overhead structures and electrical apparatus used on towers is carried out in accordance with the work schedule and requirements/established procedures
 - 2.5** Hazard warnings and safety signs are recognised and hazards and assessed WHS/OHS risks are reported to immediate authorised personnel for directions according to established procedures
 - 2.6** Known solutions to a variety of problems are applied using acquired essential knowledge and associated skills
 - 2.7** Ongoing checks of quality of the work are undertaken in accordance with instructions and established procedures
- 3 Complete the inspection of overhead structures and electrical apparatus used on towers**
 - 3.1** Work undertaken is checked against work schedule for conformance with requirements and anomalies reported in accordance with established procedures

- 3.2 Accidents and/or injuries are reported in accordance with requirements/established procedures
- 3.3 Worksite is rehabilitated, cleaned up and made safe in accordance with established procedures
- 3.4 Tools, equipment and any surplus resources and materials are, where appropriate, cleaned, checked and returned to storage in accordance with established procedures
- 3.5 Relevant work permits are signed off and overhead structures and electrical apparatus used on towers are returned to service in accordance with requirements
- 3.6 Work completion records, reports, as installed//modified drawings and/or documentation and information are finalised and processed and appropriate personnel notified

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UETTD RTP30A Inspect transmission overhead structures and electrical apparatus.

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>

Assessment Requirements for UETTD RTP30 Inspect transmission overhead structures and electrical apparatus

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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
- undertaking inspections of poles – structures and electrical apparatus including at least three (3) of the following inspection methods:
 - towers
 - overhead conductors/cables
 - structural fittings
 - electrical equipment
 - hardware
 - earthing systems
- undertaking inspections using at least two (2) of the following:
 - visual*
 - infra-red camera
 - X-ray
 - camera
 - binoculars/telescope
 - (* must do)
- complying with all of the following:
 - reporting procedures
 - reporting outcomes
- 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:

- standards, codes, legislation, supply authority regulations and/or enterprise requirements
- characteristics of materials used for transmission structures within the electrical transmission system encompassing:
 - faults that occur that influence the integrity of the structure
- deterioration of assets encompassing:
 - relationship between steel, concrete and other materials
 - deterioration in steel and concrete
 - inspection procedures for deterioration
- clearances and safety procedures
- ground line inspection procedures of electrical transmission lines encompassing:
 - requirements for inspection of transmission lines and insulators
 - use of specific equipment during inspection
 - techniques in transmission line inspection
- overhead line inspection procedures of electrical transmission lines encompassing:
 - methods and requirements for overhead line inspection on electrical structures
 - clearances for overhead conductors, cables and structures
 - techniques used to obtain close inspection of transmission lines
 - use of specific equipment and testing inspection
 - methods of recording data.

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, facilities, equipment and personal protective equipment (PPE) currently used in industry for inspecting transmission overhead structures and electrical apparatus
- applicable documentation, including workplace procedures, relevant industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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