



Australian Government

UETTD RIS81 Install telecommunications infrastructure on electricity supply industry assets

Release: 1

UETTDRI81 Install telecommunications infrastructure on electricity supply industry assets

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 installation of telecommunications infrastructure equipment within the communications corridor, such as cables, cable support and termination enclosures, which are relevant to the transmission of data. It includes the termination/connection of the telecommunication equipment in accordance with enterprise 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

UEENEEE102A Fabricate, assemble and dismantle utilities industry components

UEENEEE105A Fix and secure electrotechnology equipment

UETTDREL14 Working safely near live electrical apparatus as a non-electrical worker

Competency Field

Industry Specific Cross Discipline

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for the installation of telecommunications infrastructure equipment

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
- 1.2** Relevant requirements and established procedures for the work are communicated to relevant personnel and identified for the worksite
- 1.3** Work health and safety (WHS)/occupational health and safety (OHS) policies and procedures related to requirements and established procedures for the installation of telecommunications infrastructure equipment are obtained and confirmed for the purposes of the work to be performed
- 1.4** Work is prioritised and sequenced following consultation with supervisor 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 according to established procedures
- 1.6** Relevant work permits are received to access and perform work according to requirements and/or established procedures
- 1.7** Resources, including equipment, tools and personal protective equipment (PPE), required for the job are obtained and confirmed in working order
- 1.8** Relevant personnel at worksite are confirmed with currency in first aid, pole top rescue and other related work procedures according to requirements
- 1.9** Site is prepared in accordance with established procedures to minimise risk and damage to property, commerce and individuals

2 Carry out installation of telecommunications

- 2.1** WHS/OHS and sustainable energy principles and practices to reduce waste are monitored and followed in

infrastructure equipment		accordance with requirements and/or established procedures
	2.2	Lifting, climbing, working at heights, and use of power tools/equipment, techniques and practices are safely followed
	2.3	Essential knowledge and associated skills are applied to the safe installation of telecommunications infrastructure equipment to ensure completion in an agreed timeframe, to quality standards with a minimum of waste according to requirements
	2.4	Telecommunications infrastructure equipment and associated hardware are positioned, secured and terminated/connected in accordance with requirements and established procedures
	2.5	Telecommunications infrastructure equipment and associated hardware are maintained in accordance with requirements and established procedures
	2.6	Unplanned events in the installation of telecommunications infrastructure equipment are resolved and dealt with
	2.7	Known solutions to a variety of problems are applied using acquired essential knowledge and associated skills
	2.8	Ongoing checks of quality of the work are undertaken in accordance with instructions and established procedures
3 Complete the installation of telecommunications infrastructure equipment	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, where applicable
	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 cleaned, checked and returned to storage in accordance with established procedures
	3.5	Relevant work permits are signed off in accordance with established procedures

- 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 UETTDRIS81A Install telecommunications infrastructure on electricity supply industry assets.

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 UETTDRIS81 Install telecommunications infrastructure on electricity supply industry assets

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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
- installing telecommunications infrastructure on electricity supply industry assets using any two (2) of the following:
 - cable support
 - support brackets
 - junction boxes
 - enclosures
- using any two (2) of the following:
 - ribbon optical fibre cable
 - single mode optical fibre cable
 - multi-mode optical fibre cable
 - structured aerial cabling
- 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:

- telecommunication network drawings and plans
- WHS/OHS specific requirements for telecommunication networks encompassing:
 - aerial safety equipment
 - procedures to applying pole top rescue
- hazard identification associated with telecommunication networks equipment encompassing:
 - working at heights

- checking exposed metal for potential differences
- hazard and control measures in aerial cabling working environment
- soundness of pole for aerial cabling
- hazards associated with working with optical fibre
- aerial construction methods and regulations
- telecommunication network cables encompassing:
 - types of cables
 - cable colour coding for outdoor cable
 - colour coding of cables and termination modules and standard connectors used with twisted pair, optical fibre and coaxial cables
 - cable labelling devices
- cables protect and support requirements encompassing:
 - protection against mechanical damage
 - protection from adverse temperatures and corrosion protection from magnetic field that may affect the performance of the cable
 - cable support and protection devices, accessories and typical applications (metallic and non-metallic conduits, duct and trunking, cable ladder and tray, cable clips and ties and related accessories)
- installation techniques encompassing:
 - cable installation equipment
 - cable drawing and hauling techniques
- insulation removal and replacement
- conductor handling and cable terminations encompassing:
 - application of connecting devices for conductors and terminals
 - stress release on cables/conductors
 - methods of terminating cables (cables less than twenty pair, twenty pair cable and greater)
 - joining of aerial cables
- operating principles of fibre optic cable transmission encompassing:
 - types of optical fibre types available for telecommunications voice and data transmission
 - difference between multi-mode and single mode transmission
 - advantages of optical fibre cable compared to other cables
 - applications of optical fibre cables
 - requirements of optical fibre cables as specified in current standards
- installation techniques for optical fibre cables encompassing:
 - regulations, standards and codes applicable to optical fibre installation
 - bending radii and hauling requirements
 - cable support and securing mechanisms
 - safety precautions.

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 personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

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