



Australian Government

UETTDREL19 Identify and interpret characteristics of electrical apparatus associated with power industry assets

Release: 1

UETTDREL19 Identify and interpret characteristics of electrical apparatus associated with power 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 identification and interpretation of electrical apparatus associated with asset inspection, including interpreting the operational characteristics of the electrical apparatus, pole top structures, attachments and the relationship of the various equipment, including the association the equipment has in the correct functioning of the distribution and/or transmission system

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

UETTDREL13 Comply with sustainability, environmental and incidental response policies and procedures

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

Competency Field

Entry Level Cross Discipline

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to identify and interpret characteristics of electrical apparatus associated with power industry assets

PERFORMANCE CRITERIA

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

- 1.1** Instructions for identifying the electrical apparatus undergoing asset inspection are communicated and confirmed to ensure clear understanding
- 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 visual checking and treatment of poles and structures, and the inspection of overhead structures and electrical apparatus used on the poles are obtained and confirmed
- 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 according to established procedures
- 1.6** Relevant work permits are obtained, where necessary, to access and perform work according to requirements and/or established procedures
- 1.7** Schedule for identifying poles and structures, and the inspection of overhead structures and electrical apparatus, including practices for working safely, are confirmed in accordance with instructions and requirements
- 1.8** Resources, including personnel, equipment, tools and personal protective equipment (PPE), required for the job are obtained and confirmed in working order
- 1.9** Relevant person responsible for first aid and/or related work safety procedures at the worksite are confirmed in

accordance with established procedures to ensure safety measures are followed in the instance of an incident

- 1.10** Liaison and communication issues with appropriate personnel, authorities, clients and land owners are resolved to carry out work where necessary
- 1.11** Site is prepared according to the work schedule and to minimise risk and damage to property, commerce and individuals in accordance with established procedures
- 1.12** Personnel participating in the work are fully briefed and respective responsibilities confirmed in accordance with established procedures, where necessary
- 1.13** Traffic management plan is identified and road signs, barriers and warning devices positioned in accordance with requirements, where necessary

2 Identify and interpret characteristics of electrical apparatus associated with power industry assets

- 2.1** WHS/OHS and sustainable energy and environmental principles and practices to reduce the incidents of accidents and minimise waste are monitored and followed in accordance with requirements and established procedures
- 2.2** Tools and equipment are selected appropriate to the task requirements and are used to produce desired outcomes
- 2.3** Schedule for identifying poles and structures, and the inspection of overhead structures and electrical apparatus used on the poles are followed to ensure work is completed in an agreed time, to a quality standard and with a minimum of waste using appropriate technology
- 2.4** Essential knowledge and associated skills are applied for the safe identification of electrical apparatus to ensure completion in an agreed timeframe and to quality standards with a minimum of waste according to requirements
- 2.5** Hazard warnings and safety signs are recognised, hazards identified and WHS/OHS risks reported to immediate appropriate personnel for directions according to established procedures
- 2.6** Operational characteristics of the electrical apparatus and associated equipment are understood with respect to the primary purpose of the apparatus and associated equipment within the supply system

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| | 2.7 | Visual checks of the electrical apparatus and associated equipment are performed to identify defective or suspect condition |
| | 2.8 | Unplanned events during the identification of electrical apparatus and associated equipment are responded to within the scope of established procedures |
| | 2.9 | Known solutions to a variety of problems are applied using acquired knowledge and associated skills |
| | 2.10 | Ongoing checks of quality of the work are undertaken in accordance with instructions and established procedures |
| 3 | | Complete the identification and interpretation characteristics of electrical apparatus associated with power industry assets |
| | 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 and any surplus resources and materials are, where appropriate, cleaned, checked and returned to storage according to established procedures |
| | 3.5 | Unsafe or faulty tools are identified and marked for repair in accordance with established procedures before, during and after use |
| | 3.6 | Relevant work permits are signed off and poles and structures are returned to service in accordance with requirements |
| | 3.7 | Work completion records, reports 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 UETTDREL19A Identify and interpret characteristics of electrical apparatus associated with power 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 UETTDREL19 Identify and interpret characteristics of electrical apparatus associated with power 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
- confirming operational knowledge associated with the characteristics of electrical apparatus in eight (8) of the following:
 - single wire earth return (SWER)
 - high voltage (HV) overhead conductors and cables
 - low voltage (LV) overhead conductors and cables
 - underground cables (as attached to the poles)
 - overhead transition points and termination hardware
 - vibration mitigation hardware
 - insulators, cross-arms, cross-arm mountings and brackets
 - switches, HV fuses and fuse carriers, surge diverters and auto-reclose devices
 - pole mounted transformers and substations
 - possum guards and earth guards
 - angle of the pole
 - height of conductors
 - public lights, bolts and associated pole fixings
- confirming knowledge associated with the characteristics of at least four (4) of the following:
 - wood pole
 - steel pole
 - concrete pole
 - composite pole
 - reinforced poles
- 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:

- electrical apparatus safety requirements encompassing:
 - working safely with machinery and equipment near live electrical apparatus
 - selecting and using appropriate personal protective equipment (PPE)
 - implementing emergency procedures for the rescue of an electric shock victim
 - providing emergency first aid for an electric shock victim
- inspection of electrical apparatus encompassing:
 - standards, codes, legislation, supply authority regulations and/or enterprise requirements
 - visual checking of poles and structures
 - identification of electrical apparatus associated with power industry assets within the electrical distribution system - SWER, HV overhead conductors and cables, LV overhead conductors and cables, underground cables (as attached to the poles), overhead transition points and termination hardware, vibration mitigation hardware, insulators, cross-arms, cross-arm mountings and brackets, switches, HV fuses and fuse carriers, surge diverters, auto-reclose devices, pole mounted transformers and substations, possum guards, earth guards, angle of the pole, height of conductors, public lights, bolts and associated pole fixings
 - operational knowledge of the purpose of electrical apparatus associated with power industry assets within the electrical distribution system - SWER, HV overhead conductors and cables, LV overhead conductors and cables, underground cables (as attached to the poles), overhead transition points and termination hardware, vibration mitigation hardware, insulators, cross-arms, cross-arm mountings and brackets, switches, HV fuses and fuse carriers, surge diverters, auto-reclose devices, pole mounted transformers and substations, possum guards, earth guards, angle of the pole, height of conductors, public lights, bolts and associated pole fixings
 - interpretation of the operational characteristics and purpose of electrical apparatus associated with power industry assets
 - documenting inspection findings in accordance with enterprise requirements.

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.

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