



Australian Government

UETDRDO005 Maintain overhead energised low voltage distribution network

Release: 1

UETDRDO005 Maintain overhead energised low voltage distribution network

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.

Application

This unit involves the skills and knowledge required to maintain overhead energised low voltage (LV) distribution network in the electricity supply industry (ESI).

It includes maintaining cables and conductors, replacing poles and hardware, using specialised equipment, undertaking electrical tests and completing documentation.

The application of the skills and knowledge described in this unit may require a licence/registration to practice in the workplace.

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

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEECD0019 Fabricate, assemble and dismantle utilities industry components

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in single path circuits

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEEEL0020 Solve problems in low voltage a.c. circuits

UEEEL0021 Solve problems in magnetic and electromagnetic devices

UETDREL001 Apply environmental requirements

UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus

UETDREL005 Work safely in the vicinity of live electrical apparatus

UETDRIS007 Install and maintain distribution overhead conductors and cables

UETDRIS012 Install and maintain poles, structures and hardware

Competency Field

Distribution Overhead

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to maintain overhead energised LV distribution network

PERFORMANCE CRITERIA

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

- 1.1** Legislation, regulations, standards, codes of practice and organisational workplace requirements for the work to be performed are referred to and confirmed
- 1.2** Work plan is obtained and confirmed in accordance with workplace requirements
- 1.3** Materials required for work are determined and obtained in accordance with work plan and workplace requirements
- 1.4** Resources, including plant, equipment, tools and PPE, required for the job are identified, scheduled and coordinated and confirmed safe and in technical working order
- 1.5** Hazards are identified, risks assessed and control measures identified and applied
- 1.6** Safety observer role and responsibilities are discussed and confirmed in accordance with workplace requirements
- 1.7** Communication method between the workers and safety observer is determined and confirmed in accordance with workplace requirements
- 1.8** Safe approach distances for the work to be performed are determined and confirmed in accordance with workplace requirements
- 1.9** Work is prioritised and sequenced for completion in accordance with work plan and workplace requirements
- 1.10** Worksite is prepared in accordance with the work plan and workplace requirements

- | | | |
|--|-------------|---|
| | 1.11 | Traffic management plan is confirmed as being in place in accordance with workplace requirements |
| 2 Carry out maintenance of overhead energised LV distribution network | 2.1 | Legislation, regulations, standards, codes of practice and organisational workplace requirements for the work to be performed are applied and monitored |
| | 2.2 | Lifting, climbing, working at heights and the use of plant, tools, equipment and PPE are carried out in accordance with workplace requirements |
| | 2.3 | Hazard control measures are monitored in accordance with workplace requirements |
| | 2.4 | Safety observer is positioned to observe the work in accordance with workplace requirements |
| | 2.5 | Communication methods between workers and safety observer are used in accordance with workplace requirements |
| | 2.6 | Safe approach distances are maintained when the work is being performed |
| | 2.7 | Overhead energised LV conductors and cables are maintained in accordance with workplace requirements |
| | 2.8 | Overhead LV structure is maintained in accordance with workplace requirements |
| | 2.9 | Incidents or unplanned events are responded to in accordance with workplace requirements |
| | 2.10 | Quality checks of work are undertaken in accordance with work plan and workplace requirements |
| 3 Complete work and documentation | 3.1 | Completed work is checked for compliance against the work plan and workplace requirements |
| | 3.2 | Incidents or unplanned events are reported in accordance with workplace requirements |
| | 3.3 | Worksite is rehabilitated, cleaned and made safe in accordance with workplace requirements |
| | 3.4 | Plant, tools and equipment are cleaned, checked and returned to storage in accordance with workplace requirements |

- 3.5 Surplus materials are returned to storage or disposed of in accordance with workplace requirements
- 3.6 Work records, reports and documentation are completed in accordance with workplace requirements

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 UET Transmission, Distribution and Rail Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UETTDRDP12 Maintain overhead energised low voltage conductors and cables.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>

Assessment Requirements for UETDRDO005 Maintain overhead energised low voltage distribution network

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)
- identifying hazards, assessing risks, identifying, applying and monitoring control measures
- obtaining, inspecting and using relevant personal protective equipment (PPE)
- determining communication method with safety observer
- confirming safety observer is in position in accordance with workplace requirements
- repairing and joining energised overhead low voltage (LV) conductors and cables
- connecting and terminating conductors and cables in accordance with workplace requirements
- completing at least four (4) of the following energised LV tasks:
 - replacing strain cross arm*
 - replacing intermediate cross arm
 - conversion from intermediate to strain, or strain to intermediate
 - replacing pole
 - replacing insulator
 - installing/replacing bridge/tap
 - replacing LV isolators/links/disconnector/s
 - (*must do)
- working on energised LV from at least two (2) of the following:
 - elevated work platform (EWP)
 - ladder
 - portable platform
- using at least four (4) of the following specialised energised LV equipment:
 - insulating mats/sleeves
 - temporary bridging device
 - insulating gloves

- tensioning devices
- pole shrouds
- performing at least two (2) of the following LV tests:
 - polarity and loop impedance
 - phasing
 - neutral identification
- 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
- hazard, risk assessment and risk control requirements, including potential hazards
- types and application of PPE
- safe use of plant, tools and equipment
- events constituting an unplanned event or incident
- procedures for responding to an unplanned event or incident
- safe work practices and procedures for working on or near energised LV
- insulating gloves, including:
 - types, construction and characteristics
 - application
 - care and maintenance
 - testing
- specialised tools and equipment, including:
 - types, construction and characteristics
 - application
 - care and maintenance
 - testing
- conductor support:
 - selecting conductor support method
 - calculation of loads
 - effects of secondary loadings/forces
- safety observer:
 - role and responsibilities
 - communication methods.

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:

- relevant and appropriate materials, tools, facilities, equipment and PPE currently used in industry for maintaining overhead energised LV distribution networks
- applicable documentation, including workplace requirements, relevant industry standards, 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>