



Australian Government

UETDRDO006 Maintain, test and verify distribution overhead network

Release: 1

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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 Release 2.0.

Application

This unit consolidates critical knowledge and skills developed throughout the term of the qualification to maintain, test and verify distribution overhead network installations in the electricity supply industry (ESI).

It includes maintaining energised low voltage (LV) distribution overhead network installations.

It also includes testing and verifying network circuits, electrical apparatus and customer connections for compliance with the work plan and workplace requirements.

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

UETDRDO001 Inspect overhead poles, structures and electrical apparatus

UETDRDO005 Maintain overhead energised low voltage distribution network

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

UETDRIS008 Install and maintain electrical apparatus

UETDRIS010 Install and maintain low voltage overhead services

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, test and verify overhead 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** Plant, tools, equipment and personal protective equipment (PPE) required for work are determined, obtained and confirmed in working order
- 1.5** Hazards are identified, risks assessed and control measures identified and applied
- 1.6** Safe approach distances for the work are determined and confirmed in accordance with the work plan and workplace requirements
- 1.7** Safety observer role and responsibilities are discussed and confirmed in accordance with workplace requirements
- 1.8** Communication method between the workers and safety observer is determined and confirmed in accordance

- with workplace requirements
- 1.9** Work permits are received and signed in accordance with workplace requirements
 - 1.10** Work is prioritised and sequenced for completion in accordance with work plan and workplace requirements
 - 1.11** Equipment for testing and verification is determined, inspected, confirmed in working order and calibrated in accordance with workplace requirements
 - 1.12** Worksite is prepared in accordance with the work plan and workplace requirements
 - 1.13** Traffic management plan is confirmed as being in place in accordance with workplace requirements
- 2 Carry out maintenance of overhead 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 in position to observe the work in accordance with workplace requirements
 - 2.5** Safe approach distances are maintained when the work is being performed
 - 2.6** Communication method between workers and safety observer is used in accordance with workplace requirements
 - 2.7** Overhead energised LV structure is maintained in accordance with workplace requirements
 - 2.8** Overhead electrical apparatus is maintained in accordance with workplace requirements
 - 2.9** Incidents or unplanned events are responded to in accordance with workplace requirements
- 3 Test and verify overhead distribution network**
- 3.1** Legislation, regulations, standards, codes of practice and organisational workplace requirements for the work to

be performed are applied and monitored

- 3.2 Lifting, climbing, working at heights and the use of plant, tools, equipment and PPE are carried out in accordance with workplace requirements
- 3.3 Hazard control measures are monitored in accordance with workplace requirements
- 3.4 Safety observer is positioned to observe the work in accordance with workplace requirements
- 3.5 Safe approach distances are maintained when the work is being performed
- 3.6 Communication method between workers and safety observer is used in accordance with workplace requirements
- 3.7 Overhead distribution network installations are tested for compliance in accordance with workplace requirements
- 3.8 Overhead distribution network installations are inspected for compliance in accordance with workplace requirements
- 3.9 Inspection and test results are recorded in accordance with workplace requirements
- 3.10 Incidents or unplanned events are responded to in accordance with workplace requirements

4 Complete work and documentation

- 4.1 Incidents or unplanned events are reported in accordance with workplace requirements, as required
- 4.2 Worksite is rehabilitated, cleaned and made safe in accordance with workplace requirements
- 4.3 Plant, tools and equipment are cleaned, checked and returned to storage in accordance with workplace requirements
- 4.4 Surplus materials are returned to storage or disposed of in accordance with workplace requirements
- 4.5 Work permits are signed off in accordance with workplace requirements
- 4.6 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 UETTDRDP99 Test and verify distribution overhead installations.

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 UETDRDO006 Maintain, test and verify distribution overhead network

Modification History

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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 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)
 - safe approach distances
- identifying hazards, assessing risks, identifying, applying and monitoring control measures
- obtaining, inspecting and using relevant plant, tools, equipment and personal protective equipment (PPE)
- determining communication method with safety observer
- confirming safety observer is in position in accordance with workplace requirements
- selecting, inspecting and using specialised tools and equipment
- maintaining energised low voltage (LV) distribution overhead network installations including at least one (1) of the following:
 - strain cross arm replacement
 - intermediate cross arm replacement
 - conversion from intermediate to strain
- testing electrical apparatus, including:
 - insulation resistance
 - earth resistance
 - voltage
- testing network circuit including at least three (3) of the following:
 - phasing*
 - neutral identification
 - phase rotation
 - loop impedance
 - voltage
 - current
 - earthing systems
 - (*must do)

- testing consumer/customer connections including at least five (5) of the following:
 - neutral integrity*
 - polarity*
 - voltage
 - current
 - phase rotation
 - insulation resistance
 - neutral identification
 - loop impedance
 - earth resistance
 - (*must do)
- inspecting overhead distribution network installation for compliance
- recording test results in accordance with workplace requirements
- dealing with an unplanned event on at least one (1) occasion
- obtaining and signing on and off relevant work permits in accordance with workplace requirements
- 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
 - safe approach distances
 - network circuit testing
 - electrical apparatus testing
 - customer/consumer connection testing
 - maintenance procedures for energised LV overhead distribution network
 - capture and record test results
 - work records, reports and documentation
- hazard, risk assessment and risk control requirements, including potential hazards
- types and application of PPE
- safe use of plant, tools and specialised equipment
- application, purpose and types of work permits
- events constituting an unplanned event or incident
- procedures for responding to an unplanned event or incident
- 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, testing and verifying distribution overhead network
- applicable documentation, including workplace requirements, relevant industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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