



Australian Government

UETDRDU009 Install, test and verify distribution underground cable installations

Release: 1

UETDRDU009 Install, test and verify distribution underground cable installations

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 install, test and verify distribution underground cable installations in the electricity supply industry (ESI).

It includes the jointing, terminating and testing of underground cable and electrical equipment and the connection and testing of a customer connection.

It also includes verifying the cable installation complies 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

CPCCLDG3001 Licence to perform dogging

TLILIC0005 Licence to operate a boom-type elevating work platform (boom length 11 metres or more)

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

UETDRDU002 Inspect underground electrical apparatus

UETDRDU013 Joint, terminate and maintain high voltage underground polymeric cable

UETDRDU015 Joint, terminate and maintain low voltage underground polymeric cable

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

UETDRIS008 Install and maintain electrical apparatus

UETDRIS011 Install and maintain low voltage underground services

Competency Field

Distribution Underground

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to install, test and verify underground cable installations

PERFORMANCE CRITERIA

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

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|------------|---|
| 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 | Work is prioritised and sequenced for completion in accordance with work plan and workplace requirements |
| 1.7 | Work permits are received and signed in accordance with workplace requirements |

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|---|------------|---|
| | 1.8 | Worksite is prepared in accordance with the work plan and workplace requirements |
| 2 Carry out installation, testing and verifying of underground cable installations | 2.1 | Legislation, regulations, standards, codes of practice and organisational workplace requirements for the work to be performed are applied and monitored |
| | 2.2 | Manual handling, working in confined spaces, 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 | Cable is prepared and tested in accordance with the work plan and workplace requirements |
| | 2.5 | Cable jointing, terminating and testing is carried out in accordance with the work plan and workplace requirements |
| | 2.6 | Electrical equipment is tested in accordance with the work plan and workplace requirements |
| | 2.7 | Low voltage (LV) service installation is connected and tested in accordance with the work plan and workplace requirements |
| | 2.8 | Cable installation is verified in accordance with the work plan and workplace requirements |
| | 2.9 | Incidents or unplanned events are responded to in accordance with workplace requirements |
| 3 Complete work and documentation | 3.1 | Worksite is rehabilitated, cleaned and made safe in accordance with workplace requirements |
| | 3.2 | Incidents or unplanned events are reported in accordance with workplace requirements |
| | 3.3 | Plant, tools and equipment are cleaned, checked and returned to storage in accordance with workplace requirements |
| | 3.4 | Surplus materials are returned to storage or disposed of in accordance with workplace requirements |
| | 3.5 | Work permits are signed off 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 UETTDRCJ99 Test and verify distribution cable jointing 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 UETDRDU009 Install, test and verify distribution underground cable installations

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 on at least one occasion 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
- interpreting and using drawings, diagrams and instructions
- obtaining, inspecting and using relevant personal protective equipment (PPE)
- completing at least one (1) of the following low voltage (LV) joints:
 - tee-off
 - straight
 - breech
- completing at least one (1) of the following high voltage (HV) joints:
 - tee-off
 - straight
 - breech
- completing at least one (1) of the following LV terminations:
 - pole top
 - transformer
 - LV switchboard
 - pillar/turret
 - lighting column
- completing at least one (1) of the following HV terminations:
 - pole top
 - transformer
 - switchgear
- completing at least two (2) of the following cable tests:
 - voltage
 - continuity
 - insulation resistance

- phase identification
- installing electrical equipment, including:
 - testing electrical equipment
 - testing earthing systems
- connecting a LV service cable
- 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)
- verifying cable installations, including:
 - complying with the work plan
 - identifying and rectifying non-compliance issues
- using testing equipment in accordance with workplace requirements
- recording test results in accordance with workplace requirements
- obtaining and signing on and off relevant work permits in accordance with workplace requirements
- 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
 - live LV connection principles
- hazard, risk assessment and risk control requirements, including potential hazards
- types and application of PPE
- safe use of plant, tools and equipment
- application, purpose and types of permits
- construction manuals, system diagrams/plans and drawings
- HV and LV cable installation, including:
 - cable jointing and terminating procedures

- testing procedures
- electrical equipment installation, including:
 - construction and connection procedures
 - testing procedures
- LV service installation, including:
 - connection procedures
 - testing procedures
- cable installation verification procedures.

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 installing, testing and verifying underground cable installations
- 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>