



**Australian Government**

# **UETDRDU001 Conduct high voltage testing of underground power cable system**

**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 involves the skills and knowledge required to conduct high voltage (HV) testing of an electricity supply industry (ESI) underground power system.

It includes testing using direct current (d.c.) or alternating current (a.c.) voltage methods to identify cable system defects.

It also includes interpreting the test results to determine the integrity of the cable system.

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

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

UETDREL005 Work safely in the vicinity of live electrical apparatus

## **Competency Field**

Distribution Underground

## **Unit Sector**

Not applicable.

## Elements and Performance Criteria

### ELEMENTS

### PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

#### **1 Prepare to conduct HV testing of underground power cable system**

- 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 instruction is obtained and confirmed in accordance with workplace requirements
- 1.3** Work is prioritised and sequenced for completion in accordance with work instruction and workplace requirements
- 1.4** Hazards are identified, risks assessed and control measures identified and applied
- 1.5** Work permits are organised in accordance with workplace requirements
- 1.6** Tools, equipment and personal protective equipment (PPE) required for work are determined, obtained and confirmed in working order
- 1.7** Testing method is determined and appropriate test equipment is obtained and confirmed in working order in accordance with the work instruction and workplace requirements
- 1.8** Worksite is prepared in accordance with the work instruction and workplace requirements
- 1.9** Traffic management plan is confirmed as being in place in accordance with workplace requirements

#### **2 Carry out the testing of a HV underground power cable system**

- 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, working in confined spaces and the use of 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 Test equipment is positioned, set up for testing and confirmed to be operating correctly
  - 2.5 Cable is confirmed de-energised in accordance with workplace requirements
  - 2.6 Work permits are received and signed in accordance with workplace requirements
  - 2.7 Cable is prepared for testing and test equipment connected to the cable in accordance with workplace requirements
  - 2.8 Cable system is tested to determine the integrity of the system in accordance with workplace requirements
  - 2.9 Incidents or unplanned events are responded to in accordance with workplace requirements
- 3 Complete work and documentation**
- 3.1 Completed work is checked for compliance against the work instruction 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 Tools and equipment are cleaned, checked and returned to storage 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 UETTDRI59 Conduct high potential testing of power system underground power cables.

## Links

Companion Volume Implementation Guides are found in VETNet -

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