



Australian Government

UETDRIS009 Install and maintain ESI network infrastructure electrical equipment

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 covers the installation and maintenance of electrical equipment, such as fuse switches, drop-out switches, sectionalisers, links, surge arrestors, gas-filled and/or oil-filled switches, which are relevant to the transmission, distribution and rail networks.

It includes the termination/connection of the equipment in accordance with enterprise requirements, the repair and/or replacement of like-for-like electrical equipment and associated hardware, and sampling of insulating oils. It also encompasses the identification of faults, the relevant pre-commissioning tests involving the equipment/system and the interpretation of these tests against agreed specifications.

It excludes the energisation of the equipment maintained in a highly complex, interdependent and interconnected electricity supply network system, where the effects of unintended consequences on the system are high risk and appropriate personnel effect energisation.

The application of the skills and knowledge described in this unit requires 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 licensing requirements which must be confirmed prior to commencing this unit.

Pre-requisite Unit

UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace

UEENEEE102A Fabricate, assemble and dismantle utilities industry components

UEENEEE104A Solve problems in d.c. circuits

UEENEEE105A Fix and secure electrotechnology equipment

UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications

UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work

UEENEEG006A Solve problems in single and three phase low voltage machines

UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits

UEENEEG063A Arrange circuits, control and protection for general electrical installations

UEENEEG101A Solve problems in electromagnetic devices and related circuits

UEENEEG102A Solve problems in low voltage a.c. circuits

UEENEEG103A Install low voltage wiring and accessories

UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations

UEENEEG105A Verify compliance and functionality of low voltage general electrical installations

UEENEEG106A Terminate cables, cords and accessories for low voltage circuits

UEENEEG107A Select wiring systems and cables for low voltage general electrical installations

UEENEEG108A Troubleshoot and repair faults in low voltage electrical apparatus and circuits

UEENEEG109A Develop and connect electrical control circuits

UEENEEK142A Apply environmentally and sustainable procedures in the energy sector

UETDREL005 Work safely in the vicinity of live electrical apparatus

UETDRIS005 Implement & monitor power system environmental & sustainable energy management policies & procedures

UETDRIS006 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

Competency Field

Industry Specific Cross Discipline

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for the installation and maintenance of network infrastructure electrical equipment

PERFORMANCE CRITERIA

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

1.1 Work schedules, including drawings, plans, requirements, established procedures and material lists, are received, analysed and confirmed, as necessary, by site inspection

- 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 installation and/or maintenance of network infrastructure electrical equipment are obtained and confirmed for the purposes of the work to be performed
- 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, including emergency exits kept clear according to established procedures
- 1.6** Relevant work permits are obtained to access and perform work according to requirements and/or established procedures
- 1.7** Resources, including personnel, equipment, tools and personal protective equipment (PPE) required for the job are obtained and confirmed in working order
- 1.8** Relevant personnel at worksite are confirmed current in first aid, pole top rescue and other related work procedures according to requirements
- 1.9** Liaison and communication issues with others/authorised personnel, authorities, clients and landowners are resolved to carry out work, where necessary
- 1.10** Site is prepared according to the work schedule and to minimise risk and damage to property, commerce and individuals in accordance with established procedures
- 1.11** Personnel participating in the work, including plant operators and contractors, are fully briefed and respective responsibilities confirmed, where applicable, in accordance with established procedures
- 1.12** Road signs, barriers and warning devices are positioned in accordance with requirements

- 2 Carry out installation and maintenance of network infrastructure electrical equipment**
- 2.1** WHS/OHS and sustainable energy principles and practices to reduce the incidents of accidents and minimise waste are monitored and followed in accordance with requirements and/or established procedures
 - 2.2** Lifting, climbing, working in confined spaces and aloft, and use of power tools/equipment, techniques and practices are safely followed, and currency according to requirements confirmed
 - 2.3** Essential knowledge and associated skills are applied in the safe installation of network infrastructure electrical equipment to ensure completion in an agreed timeframe and to quality standards with a minimum of waste according to requirements
 - 2.4** Electrical equipment and associated hardware are positioned, secured and terminated/connected in accordance with requirements and established procedures
 - 2.5** Maintenance, including repair and/or replacement of network infrastructure electrical equipment, is carried out in accordance with the work schedule and requirements/established procedures
 - 2.6** Hazard warnings and safety signs are recognised and hazards and assessed WHS/OHS risks are reported to immediate authorised personnel for directions according to established procedures
 - 2.7** Unplanned events in the installation of electrical equipment (network infrastructure) are undertaken within the scope of established procedures
 - 2.8** Known solutions to a variety of problems are applied using acquired essential knowledge and associated skills
 - 2.9** Ongoing checks of quality of the work are undertaken in accordance with instructions and established procedures
- 3 Complete the installation and maintenance of network infrastructure electrical equipment**
- 3.1** Work undertaken is checked/tested against works 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, equipment and any surplus resources and materials are, where appropriate, cleaned, checked and returned to storage in accordance with established procedures
- 3.5 Relevant work permit(s) are signed off and electrical equipment (network infrastructure) are returned to service in accordance with requirements
- 3.6 Work completion records, reports, as installed/modified drawing 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 UET Transmission, Distribution and Rail Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UETTDRI546 Install and maintain ESI network infrastructure electrical equipment.

Links

Companion Volume Implementation Guides are found in VETNet -

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