



Australian Government

UETTD RIS38 Install and maintain public lighting systems in remote communities

Release: 1

UETTDRI38 Install and maintain public lighting systems in remote communities

Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package.

Application

This unit involves the skills and knowledge required to install and maintain public lighting systems in remote communities in the electricity supply industry (ESI).

It includes completing installation and maintenance of public lighting systems; inspecting, testing and commissioning of the system associated with the street lighting circuit, associated hardware and earthing system; and installing associated hardware, components, wiring and earthing system. Maintenance also includes working on energised LV overhead or underground public lighting systems, including diagnosis of faults and updating relevant system data and/or public lighting maintenance records.

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

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

Common Unit Group

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

UEENEEE102A Fabricate, assemble and dismantle utilities industry components

UEENEEE103A Solve problems in ELV single path 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

UEENEEK101A Maintain safety and tidiness of remote area power supply systems

UEENEEK102A Work safely with remote area power supply systems

UEENEEK116A Maintain and repair remote area power generation facilities

UEENEEK120A Maintain operation of remote area power generation plant

UETTDREL11 Apply sustainable energy and environmental procedures

UETTDREL16 Working safely near live electrical apparatus

UETTDRI32 Solve electrical problems in remote community network apparatus

UETTDRI33 Solve electrical problems in remote community network systems

UETTDRI99 Test and verify distribution remote area installations

Competency Field

Industry Specific Cross Discipline

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for installation and maintenance of public lighting systems

PERFORMANCE CRITERIA

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

- 1.1** Works schedules, construction plans, drawings, workplace procedures and material lists are received and confirmed
- 1.2** Job requirements and workplace procedures are identified and communicated with relevant personnel
- 1.3** Work health and safety (WHS)/occupational health and safety (OHS), environmental and workplace procedures for the installation and maintenance of public lighting systems are obtained and confirmed for the purposes of the work to be performed
- 1.4** Work is prioritised and sequenced for completion within acceptable timeframes following consultation with relevant personnel and in accordance with workplace procedures
- 1.5** Hazards are identified, WHS/OHS risks assessed and control measures identified in accordance with workplace procedures
- 1.6** Relevant work permits are obtained, understood and

signed in accordance with workplace procedures

1.7 Plant, equipment, tools and personal protective equipment (PPE) required for work are identified, obtained and confirmed in working order

1.8 Worksite is prepared to minimise risk, damage to property, commerce and individuals in accordance with workplace procedures

1.9 Traffic management plan is confirmed as being applied in accordance with workplace procedures

2 Carry out installation and maintenance of public lighting systems

2.1 WHS/OHS, sustainable energy and environmental principles and practices are monitored and followed to reduce incidents in accordance with workplace procedures

2.2 Requirements for lifting and/or climbing and/or working at heights and the use of power tools/equipment are followed in accordance with workplace procedures

2.3 Installation and maintenance of public lighting systems are performed in agreed timeframes, to quality standards and with a minimum of waste in accordance with workplace procedures

2.4 Excavation/foundation construction is inspected and confirmed as being in accordance with workplace procedures

2.5 Associated hardware, fittings and control gear are installed in accordance with workplace procedures

2.6 Earthing systems and street lighting circuits are installed in accordance with workplace procedures

2.7 Inspection of public lighting and associated hardware is conducted to determine compliance with job requirements and workplace procedures

2.8 Maintenance, including repair and/or replacement of the public lighting system, is performed in accordance with jobs schedule and workplace procedures

2.9 Unplanned events are responded to in accordance with workplace procedures

2.10 Quality checks of work are undertaken in accordance

- with workplace procedures
- 3 Complete installation and maintenance of public lighting systems**
- 3.1** Completed work is checked against work schedule, construction plans and drawings for compliance and anomalies are reported in accordance with workplace procedures
 - 3.2** WHS/OHS and environmental incidents are reported in accordance with workplace procedures, as required
 - 3.3** Worksite is rehabilitated, cleaned up and made safe in accordance with workplace procedures
 - 3.4** Tools, equipment and surplus resources are, where appropriate, cleaned, checked and returned to storage in accordance with workplace procedures
 - 3.5** Relevant work permits are signed off and the public lighting system is returned to service or disposed of in accordance with workplace procedures
 - 3.6** Work records, reports and/or documentation are completed in accordance with workplace procedures

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 Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UETTDRI38A Install and maintain public lighting systems in remote communities.

Links

UET Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>

Assessment Requirements for UETTDRIS38 Install and maintain public lighting systems in remote communities

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 two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including the use of risk control measures
- applying sustainable energy principles and practices
- installing and maintaining public lighting systems on poles/columns including at least one (1) of the following:
 - wood
 - concrete
 - steel
 - composite
- installing lanterns/luminaires, including at least two (2) of the following:
 - high pressure mercury vapour
 - low pressure and high pressure sodium vapour
 - fluorescent
 - quartz-halogen
- using specialist testing devices, including at least three (3) of the following:
 - voltage detectors*
 - insulation resistance testers
 - clamp-on ammeters
 - continuity testers
 - fault indicators
 - (* must use)
- dealing with unplanned events on at least one (1) occasion.

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:

- standards, codes, legislation, supply authority regulations, local government and/or enterprise requirements pertaining to the installation and maintenance of public lighting systems and associated equipment
- types of lighting systems - overhead and underground
- safety precautions specific to working on street lighting - safe working practices and procedures, working at heights, working in confined spaces, permit to work systems and isolation procedures
- basic public lighting principles - electromagnetic spectrum, principles of colour, behaviour of light and factors that affect illumination
- requirements for the use of enterprise construction manuals, systems, diagrams/plans and drawings - constructing streetlight, street lighting circuits and earthing system
- types of tools and equipment used for installation and maintenance
- types and function of lanterns/luminaries/lamps, control equipment, poles and associated hardware used for street lighting - high pressure mercury vapour, low pressure and high pressure sodium vapour, fluorescent, quartz-halogen, wood, concrete, steel, composite, choke boxes, photo-electric cells, time switches, contactor boxes, brackets and street lights standards
- techniques for the installation of street lighting systems
- techniques for the inspection, testing and commissioning of street lighting systems
- techniques for the maintenance of street lighting systems - diagnosing of faults; removing, repairing, replacement and cleaning of public lighting and associated hardware; and controlling and switching of lighting systems.

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:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment (PPE) currently used in industry for installing and maintaining public lighting systems in remote communities
- applicable documentation, including workplace procedures, relevant industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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