



Australian Government

UETDRIS013 Install and maintain public lighting systems

Release: 1

UETDRIS013 Install and maintain public lighting systems

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 install and maintain public lighting systems in the electricity supply industry (ESI).

It includes installing underground and/or overhead public lighting system, poles/columns, hardware and control equipment.

It also includes testing and commissioning, inspecting and maintaining the public lighting 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 requirement 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

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

UETDRIS012 Install and maintain poles, structures and hardware

Competency Field

Industry Specific Cross Discipline

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to install and maintain public lighting systems

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** Safety observer role and responsibilities are discussed and confirmed in accordance with workplace requirements
- 1.7** Communication method between the workers and safety observer is determined and confirmed in accordance with workplace requirements
- 1.8** Safe approach distances for the work to be performed are determined and confirmed in accordance with workplace requirements
- 1.9** Work is prioritised and sequenced for completion in accordance with work plan and workplace requirements

- 1.10** Worksite is prepared in accordance with the work plan and workplace requirements
 - 1.11** Traffic management plan is confirmed as being in place in accordance with workplace requirements
- 2 Carry out installation and maintenance of underground public lighting systems**
 - 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 at heights, 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 is positioned to observe the work in accordance with workplace requirements
 - 2.5** Communication methods between workers and safety observer are used in accordance with workplace requirements
 - 2.6** Safe approach distances are maintained when the work is being performed
 - 2.7** Excavation/foundation construction is inspected in accordance with the work plan and workplace requirements
 - 2.8** Pole/column, hardware and control equipment are assembled in accordance with the work plan and workplace requirements
 - 2.9** Pole/column is erected and stabilised in accordance with the work plan and workplace requirements
 - 2.10** Earthing and public lighting circuits are installed in accordance with the work plan and workplace requirements
 - 2.11** Public lighting system is tested and commissioned in accordance with the work plan and workplace requirements
 - 2.12** Public lighting and associated hardware are inspected in accordance with workplace requirements

- 2.13 Public lighting systems are maintained in accordance with the work plan and workplace requirements
- 2.14 Incidents or unplanned events are responded to in accordance with workplace requirements
- 2.15 Quality checks of work are undertaken in accordance with work plan and workplace requirements
- 3 Carry out installation and maintenance of overhead public lighting systems**
 - 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 Communication methods between workers and safety observer are used in accordance with workplace requirements
 - 3.6 Safe approach distances are maintained when the work is being performed
 - 3.7 Hardware, fittings and control equipment are assembled in accordance with the work plan and workplace requirements
 - 3.8 Public lighting is installed in accordance with the work plan and workplace requirements
 - 3.9 Public lighting system is tested and commissioned in accordance with the work plan and workplace requirements
 - 3.10 Public lighting and associated hardware are inspected in accordance with workplace requirements
 - 3.11 Public lighting systems are maintained in accordance with the work plan and workplace requirements
 - 3.12 Incidents or unplanned events are responded to in accordance with workplace requirements

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| | 3.13 | Quality checks of work are undertaken in accordance with work plan and workplace requirements |
| 4 Complete work and documentation | 4.1 | Completed work is checked for compliance against the work plan and workplace requirements |
| | 4.2 | Incidents or unplanned events are reported in accordance with workplace requirements |
| | 4.3 | Worksite is rehabilitated, cleaned and made safe in accordance with workplace requirements |
| | 4.4 | Plant, tools and equipment are cleaned, checked and returned to storage in accordance with workplace requirements |
| | 4.5 | Surplus materials are returned to storage or disposed of 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 UETTDRI53 Install and maintain power system public lighting.

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 UETDRIS013 Install and maintain public lighting systems

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 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 personal protective equipment (PPE)
- determining communication method with safety observer
- confirming safety observer is in position in accordance with workplace requirements
- installing and maintaining public lighting poles/columns
- installing and maintaining public lighting hardware, including any three (3) of the following:
 - luminaires
 - photoelectric cells
 - lamps
 - fuses
 - control components
 - brackets
- conducting at least five (5) of the following tests:
 - voltage
 - current
 - insulation resistance
 - neutral identification
 - polarity
 - loop impedance
 - earth resistance
- 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
 - safe approach distances
 - inspection, testing and commissioning of public lighting systems
- hazard, risk assessment and risk control requirements, including potential hazards
- types and application of PPE
- safe use of plant, tools and equipment
- events constituting an unplanned event or incident
- procedures for responding to an unplanned event or incident
- safety observer:
 - role and responsibilities
 - communication methods
- construction manuals, system diagrams/plans and drawings for public lighting
- basic public lighting principles
- types, function and operation of lanterns/luminaires/lamps
- types, function and operation of control equipment
- types and function of poles/columns
- types and function of hardware used for public lighting
- overhead and underground public lighting systems
- controlling and switching of public lighting systems
- methods for the installation of public lighting systems
- maintenance of public lighting systems, including:
 - fault types and causes
 - cleaning
 - removing, repairing and replacing hardware.

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 and maintaining public lighting systems
- applicable documentation, including workplace requirements, relevant industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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