



Australian Government

Assessment Requirements for UETDRDS021 Design public lighting systems

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 4.0.

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 (2) separate occasions and include:

- designing of public lighting systems, including:
 - specifications
 - requirements for site inspection
 - sustainable energy principles and practices
 - compliance against legislation, regulations, standards and codes of practice, project and workplace requirements
 - identifying, minimising or eliminating health and safety risks by using safety and control measures
 - environmental sustainability principles
 - obtaining, inspecting and using relevant personal protective equipment (PPE) for site inspection
 - prioritising and sequencing work for completion in accordance with workplace requirements
- performing at least one (1) site inspection
- performing ongoing quality checks of work in accordance with workplace requirements
- checking final design against project and workplace requirements
- completing relevant work records, reports and documentation
- completing six (6) designs of a public lighting system using at least three (3) of the following project types:
 - single light on existing assets
 - main road/minor road schemes
 - intersections
 - traffic management requirements
 - alteration to existing assets
 - multi-circuit systems
- completing all of the following for each design:
 - design control checklist

- rectifying errors.

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:

- public lighting systems design, including:
 - project requirements
 - design specifications
 - hazard, risk assessment and risk control requirements, including potential hazards
 - types and application of PPE
 - site inspections
 - prioritisation and sequencing of work for completion
 - application of environmental sustainability principles and practices
 - application of sustainable energy principles and practices
 - compliance with legislation, regulations, standards, codes of practice, and project and workplace requirements
 - work records, reports and documentation
 - manuals, diagrams and drawings
- public lighting principles, including:
 - light design layout
 - electromagnetic spectrum
 - principles of colour
 - behaviour of light
 - factors that affect illumination
 - tools, equipment, and techniques used for installation, maintenance, and testing
 - types and function of lanterns/luminaires/lamps, control equipment, poles and associated hardware used for street lighting
- types of tariffs and charges
- types of street lighting components and circuits
- factors affecting external lighting design
- calculation of light output and illuminance
- rated life of luminaries
- special lighting situations, including security lighting, hazardous street locations and emergency lighting
- principles of surveying
- principles of computer-aided drafting.

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

Links

Companion Volume Implementation Guides are found in VETNet -

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