



Australian Government

Assessment Requirements for UETDRDS020 Design overhead distribution 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 the requirements of the elements and performance criteria on at least two (2) separate occasions and include:

- designing of overhead distribution systems, including:
 - specifications
 - requirements for site inspection
 - systems modelling to evaluate and determine best outcomes
 - 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) overhead distribution or sub-transmission system designs for at least three (3) of the following:
 - residential subdivision developments
 - industrial/commercial subdivision developments
 - upgrade/alteration to existing assets
 - multi-pole extensions
 - in-line pole relocations
 - multi-circuit overhead lines
- completing all of the following for each design:

- a design control checklist
- rectifying errors.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- overhead distribution 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
 - use of systems modelling to evaluate and determine best outcomes
 - application of environmental sustainability principles and practices
 - compliance with legislation, regulations, standards, codes of practice, and project and workplace requirements
 - work records, reports and documentation
- distribution infrastructure, including:
 - manuals and diagrams
 - residential subdivision developments
 - industrial/commercial subdivision developments
 - upgrade/alteration to existing assets
 - multi-pole extensions
 - in-line pole relocations
 - multi-circuit overhead lines
 - construction types, structures and clearances
 - material lists, conductor size, type and route length
- control procedures and documents, including:
 - design control checklists
 - common design errors
 - rectification of errors
- layout principles for overhead distribution, including determination of:
 - conductor size, type and route length
 - materials, equipment and tools
 - component types, quantities and costing
 - component and equipment spacing
- resources required for stringing and maintenance of conductors
- types and characteristics of poles and associated equipment

- buried services and other infrastructure, including:
 - telecommunications
 - power
 - water
 - sewerage
 - gas
- calculation of voltage drop in relation to length of cable run
- methods of joining and terminating conductors
- techniques in the installation of conductors
- techniques in location of conductor faults
- techniques in conductor drawing
- 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>