



Australian Government

Assessment Requirements for UETDRDS018 Design distribution protection 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 distribution protection systems, including:
 - specifications
 - requirements for site inspection
 - systems modelling to evaluate and determine best outcomes
 - 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
 - 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 at least two (2) protection system designs from two (2) of the following project types:
 - overhead designs
 - underground designs
 - substation designs
- completing all of the following for each design:
 - design control checklist
 - rectifying errors
 - calculations of fault levels
 - selection of appropriate protection devices
 - automation requirements

- protection coordination schemes.

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:

- distribution protection systems development, including:
 - project requirements
 - development 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 for best outcomes
 - compliance with legislation, regulations, standards, codes of practice, and project and workplace requirements
 - work records, reports and documentation
 - manuals, diagrams and drawings
- types of distribution equipment
- installation and maintenance procedures for distribution equipment
- electrical equipment associated with distribution field device protection and control schemes
- calculation of fault levels
- interrupting device capabilities
- types, operation, and setting of protection 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:

- relevant and appropriate materials, tools, facilities, equipment and PPE currently used in industry for high voltage (HV) and low voltage (LV) distribution protection systems

- 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>