



Australian Government

**Assessment Requirements for
UETDRSO015 Develop and validate
distribution and sub-transmission switching
programs**

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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:

- establishing the purpose of the distribution and sub-transmission switching program
- analysing data and determining expected work outcome
- identifying hazards, assessing risks, and identifying, applying and monitoring control measures
- confirming, reviewing, and updating workplan, based on technical advice, site inspection, and data analysis
- determining equipment required for the work
- prioritising and sequencing work
- checking completed work for compliance against the work plan and workplace requirements
- completing relevant work records, reports and documentation
- using available resources to determine best outcomes
- using and interpreting single line diagrams (SLD)
- demonstrating one (1) switching program for each of the following:
 - high voltage (HV) transformer
 - HV switchgear
 - HV lines and feeders
- demonstrating one (1) switching program, which considers at least two (2) of the following:
 - commissioning of HV plant
 - planned interruption to HV customer
 - installation of a mobile generator
 - consideration of paralleling feeders
 - HV switching impact on low voltage (LV) customers
 - HV capacitors
 - HV regulators
- preparing switching programs to isolate, test and earth all the following:
 - HV transformer
 - HV switchgear

- HV lines
- preparing, writing and validating a switching program, to include managing all of the following:
 - load
 - voltage
 - system reliability
 - critical customers.

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:

- purpose of the HV switching program
- data analysis
- hazard, risk assessment and risk control requirements, including potential hazards
- operational personnel requirements
- application, purpose, and types of permits
- work records, reports and documentation
- writing switching programs
- interconnected HV electrical networks
- principles of HV single wire earth return (SWER) system
- principles of harmonics
- principles of resonant networks
- HV switching principles, including:
 - HV switching operator responsibilities
 - manuals, system diagrams, plans and drawings
 - types, characteristics and capabilities of electrical apparatus
 - types, characteristics and capabilities of specialised tools and testing equipment
 - sources of possible back-feed
 - restrictions on electrical apparatus
 - HV isolation procedures
 - HV earthing procedures
 - fault levels and settings
 - load calculation
 - operating agreements.

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 computerised electrical plant control and monitoring facilities currently used in industry
- applicable documentation, including workplace requirements, relevant industry standards, equipment specifications, regulations, codes of practice, operational event data, network drawings, crisis management procedures 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>