



Australian Government

Assessment Requirements for UETDRSO017 Develop and validate transmission switching programs

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:

- establishing the purpose of the 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
- determining work permits in accordance with workplace requirements
- 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)
- preparing, writing and validating one (1) switching program for each of the following:
 - extra high voltage (EHV) transformer
 - EHV switchgear
 - EHV lines and feeders
- preparing, writing and validating one (1) switching program, which considers at least two (2) of the following:
 - commissioning of EHV plant
 - planned interruption to EHV customer
 - installation of a mobile generator
 - consideration of paralleling feeders
 - EHV switching impact on low voltage (LV) customers
 - EHV capacitors
 - EHV regulators
- preparing switching programs to isolate, test and earth all the following:

- EHV transformer
- EHV switchgear
- EHV lines and feeders
- 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 of the requirements of the elements and performance criteria and include knowledge of:

- purpose of the EHV 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 EHV electrical networks
- principles of EHV single wire earth return (SWER) system
- principles of harmonics
- principles of resonant networks
- fault levels and settings
- load calculation
- operating agreements
- types, characteristics and capabilities of specialised tools and testing equipment
- types, characteristics and capabilities of electrical apparatus
- EHV switching principles, including:
 - EHV switching operator responsibilities
 - alternative sources of supply
 - restrictions on electrical apparatus
 - EHV isolation procedures
 - EHV earthing procedures.

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 tools, equipment, 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, modelling tools, drawings 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>