



Australian Government

Assessment Requirements for UETTDRTS32 Conduct evaluation of power systems primary plant

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.

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 separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including the use of risk control measures
- applying sustainable energy principles and practices
- completing five (5) of the following tests on primary plant – transformers (note: at least two (2) (*) must be included):
 - *direct current (d.c.) high voltage (HV) tests
 - *alternating current (a.c.) HV tests
 - *induced HV tests
 - ratio tests
 - polarity tests
 - winding resistance tests
 - impedance tests
 - insulation resistance tests
 - transformer vector group tests
 - winding temperature indicator tests
 - alarm tests
 - neutral current transformer (CT) tests
- complete five (5) of the following tests on primary plant – circuit breakers (note: at least two (2) (*) must be included):
 - profiling and contact timing
 - *a.c. HV tests
 - function tests
 - minimum voltage operation tests
 - insulation resistance tests
 - contact resistance tests
 - auxiliary contact tests
 - alarm tests

- complete at least three (3) of the following tests on primary plant – capacitor banks
 - cell capacitance measurement
 - neutral CT tests
 - balance tests
 - insulation resistance
- dealing with unplanned events on at least one (1) occasion.

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:

- detailed operation of fundamental test equipment encompassing:
 - care and safe use
 - operating principles
 - comparison of different operating principle meters used for the same purpose
 - accuracy and loading effects of meters - measurement of voltage, current, power, resistance, insulation resistance, impedance and phase sequence, and the use of oscilloscopes
- primary plant testing encompassing:
 - transformers - d.c. HV tests, a.c. HV tests, HV tests, ratio tests, polarity tests, winding resistance tests, impedance tests, insulation resistance tests, transformer vector group test, winding temperature indicator test, alarm tests and neutral CT tests
 - circuit breakers - d.c. HV tests, a.c. HV tests, induced HV tests, function tests, operation timing, minimum voltage operation test, insulation resistance test, contact resistance test, auxiliary contact test and alarm tests
 - capacitor banks - d.c. HV tests, a.c. HV tests, induced HV tests, neutral CT tests, balance tests and insulation resistance.

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:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, relevant industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

UET Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>