



Australian Government

**UETTDRSB39 Perform power system
substation switching operation to a given
schedule**

Release: 1

UETTDRSB39 Perform power system substation switching operation to a given schedule

Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package.

Application

This unit involves the skills and knowledge required to perform power system substation switching operation to a given schedule in the electricity supply industry (ESI).

It includes conducting switching operations in a substation in accordance with given instructions, switching schedule and workplace procedures. It also includes operation of substation switching devices such as circuit breakers, air break switches, fuses, reclosers, ring main units and isolators.

The application of the skills and knowledge described in this unit may require a licence/registration to practice in the workplace.

Other conditions may apply under State and Territory legislative and regulatory licensing requirement which must be confirmed prior to commencing this unit.

Pre-requisite Unit

All competencies in the Common Unit Group must have been completed, plus all competencies in one (1) of the identified Pathway Unit Group(s).

Common Unit Group

UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace

UEENEEE102A Fabricate, assemble and dismantle utilities industry components

UEENEEE104A Solve problems in d.c. circuits

UEENEEE105A Fix and secure electrotechnology equipment

UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications

UEENEEG101A Solve problems in electromagnetic devices and related circuits

UEENEEG102A Solve problems in low voltage a.c. circuits

UETTDRREL16 Working safely near live electrical apparatus

Transmission Overhead Pathway Group

UETTDRREL11 Apply sustainable energy and environmental procedures

UETTDRREL12 Operate plant and equipment near live electrical conductors and apparatus

UETTDNIS54 Install and maintain poles, structures and overhead conductors and cables

UETTDNTP26 Install transmission structures and associated hardware

UETTDNTP27 Maintain transmission structures and associated hardware

UETTDNTP29 Install and maintain transmission overhead conductors and cables

Distribution Overhead Pathway Group

UETTDNDP12 Maintain overhead energised low voltage conductors and cables

UETTDNREL11 Apply sustainable energy and environmental procedures

UETTDNREL12 Operate plant and equipment near live electrical conductors and apparatus

UETTDNIS41 Install network infrastructure electrical equipment

UETTDNIS42 Maintain network infrastructure electrical equipment

UETTDNIS52 Install and maintain poles, structures and associated hardware

UETTDNIS54 Install and maintain poles, structures and overhead conductors and cables

UETTDNIS56 Install and maintain low voltage overhead services

Rail Traction Pathway Group

UETTDNREL11 Apply sustainable energy and environmental procedures

UETTDNREL12 Operate plant and equipment near live electrical conductors and apparatus

UETTDNIS52 Install and maintain poles, structures and associated hardware

UETTDNIS54 Install and maintain poles, structures and overhead conductors and cables

UETTDNRRT21 Install traction overhead wiring systems

UETTDNRRT22 Maintain traction overhead wiring systems

UETTDNRRT23 Install rail traction bonds

UETTDNRRT27 Install overhead traction components and equipment

UETTDNRRT28 Maintain overhead traction components and equipment

Distribution Cable Jointing Pathway Group

UETTDNRCJ21 Lay ESI electrical cables

UETTDNRCJ26 Install and maintain de-energised low voltage underground polymeric cables

UETTDNRCJ27 Install and maintain de-energised high voltage underground polymeric cables

UETTDNREL11 Apply sustainable energy and environmental procedures

UETTDNREL12 Operate plant and equipment near live electrical conductors and apparatus

UETTDNIS41 Install network infrastructure electrical equipment

UETTDNIS42 Maintain network infrastructure electrical equipment

UETTDNIS55 Install and maintain low voltage underground services

Electrical Pathway Group

UEENEEE137A Document and apply measures to control OHS risks associated with

electrotechnology work

UEENEEG006A Solve problems in single and three phase low voltage machines

UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits

UEENEEG063A Arrange circuits, control and protection for general electrical installations

UEENEEG106A Terminate cables, cords and accessories for low voltage circuits

UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits

UEENEEG109A Develop and connect electrical control circuits

UEENEEK142A Apply environmentally and sustainable procedures in the energy sector

UETTDRIS67 Solve problems in energy supply network equipment

Competency Field

Substation

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for substation switching to given schedule

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** Switching and work schedules, plans, drawings, workplace procedures and material lists are received and confirmed
- 1.2** Job requirements and workplace procedures are identified and communicated with relevant personnel
- 1.3** Work health and safety (WHS)/occupational health and safety (OHS), environmental and workplace procedures for substation switching are obtained and confirmed for the purposes of the work to be performed
- 1.4** Work is prioritised and sequenced for completion within acceptable timeframes following consultation with relevant personnel and in accordance with workplace procedures

- 1.5 Hazards are identified, WHS/OHS risks are assessed and control measures identified in accordance with workplace procedures
 - 1.6 Relevant authority is obtained to access and perform switching in accordance with workplace procedures
 - 1.7 Plant, equipment, tools and personal protective equipment (PPE) required for work is identified, obtained and confirmed in working order
 - 1.8 Worksite is prepared to minimise risk, damage to property, commerce and individuals in accordance with workplace procedures
 - 1.9 Traffic management plan is confirmed as being applied in accordance with workplace procedures
- 2 Carry out substation switching to given schedule**
- 2.1 WHS/OHS, sustainable energy and environmental principles and practices are monitored and followed to reduce incidents in accordance with workplace procedures
 - 2.2 Requirements for lifting and/or climbing and/or working at heights and the use of power tools/equipment are followed in accordance with workplace procedures
 - 2.3 Substation switching to given schedule are applied to ensure completion in agreed timeframes, to quality standards and with a minimum of waste in accordance with workplace procedures
 - 2.4 Communications with switching control officer are established and maintained throughout isolation operation in accordance with workplace procedures
 - 2.5 Electrical equipment, associated circuits, line/network or worksite to be switched is isolated and checked as de-energised using appropriate devices, earthed, where required, and load transferred in accordance with job requirements and workplace procedures
 - 2.6 Substation switching to a given schedule is performed in accordance with work schedule, job requirements and workplace procedures
 - 2.7 Unplanned events are responded to in accordance with workplace procedures

- 3 Complete substation switching to given schedule**
- 2.8** Relevant work permits are prepared and issued in accordance with workplace procedures
 - 2.9** Quality checks of work are undertaken in accordance with workplace procedures
 - 3.1** Completed work is checked against work schedule, construction plans and drawings for compliance and anomalies are reported in accordance with workplace procedures
 - 3.2** WHS/OHS and environmental incidents are reported in accordance with workplace procedures, as required
 - 3.3** Worksite is rehabilitated, cleaned up and made safe in accordance with workplace procedures
 - 3.4** Tools, equipment and surplus resources and materials are, where appropriate, cleaned, checked and returned to storage in accordance with workplace procedures
 - 3.5** Relevant work permits are signed off, safety devices are removed, and the system is re-energised and returned to service in accordance with workplace procedures
 - 3.6** Work records, reports and/or documentation are completed in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UETTDRSB39A Perform power system substation switching operation to a given schedule.

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>