



**Australian Government**

# **UETTD RIS48 Develop high voltage switching schedule**

**Release: 1**

# UETTDNIS48 Develop high voltage switching 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 covers the preparation of a basic switching schedule for interconnected high voltage (HV) network plant. It includes planning basic outages and taking into account loading of network components. It also includes the calculation of network loading conditions to ensure the network is operating within designed parameters.

The application of the skills and knowledge described in this unit may require a licence/registration to practice in the workplace subject to regulations for undertaking of electrical work.

Other conditions may apply under state and territory legislative and regulatory licencing requirements 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

UETTDREL16 Working safely near live electrical apparatus

UETTDNIS44 Perform HV field switching operation to a given schedule

### Transmission Overhead Pathway Group

UETTDREL11 Apply sustainable energy and environmental procedures

UETTDREL12 Operate plant and equipment near live electrical conductors and apparatus

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

UETTDRT26 Install transmission structures and associated hardware

UETTDRT27 Maintain transmission structures and associated hardware

UETTDRT29 Install and maintain transmission overhead conductors and cables

#### Distribution Overhead Pathway Group

UETTDREL11 Apply sustainable energy and environmental procedures

UETTDREL12 Operate plant and equipment near live electrical conductors and apparatus

UETTDREL12 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

UETTDREL11 Apply sustainable energy and environmental procedures

UETTDREL12 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

UETTDRT21 Install traction overhead wiring systems

UETTDRT22 Maintain traction overhead wiring systems

UETTDRT23 Install rail traction bonds

UETTDRT27 Install overhead traction components and equipment

UETTDRT28 Maintain overhead traction components and equipment

#### Distribution Cable Jointing Pathway Group

UETTDRCJ21 Lay ESI electrical cables

UETTDRCJ26 Install and maintain de-energised low voltage underground polymeric cables

UETTDRCJ27 Install and maintain de-energised high voltage underground polymeric cables

UETTDREL11 Apply sustainable energy and environmental procedures

UETTDREL12 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

Industry Specific Cross Discipline

## Unit Sector

Not applicable.

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

#### **1 Prepare/plan to develop HV switching schedules**

### PERFORMANCE CRITERIA

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

- 1.1** Work schedules, including drawings, plans, requirements, established procedures and material lists, are obtained and analysed, as necessary, by site inspection and the extent of the preparation of the work determined for planning and coordination
- 1.2** Work is prioritised and sequenced for the most efficient and effective outcome following consultation with others for completion within acceptable timeframes, to a quality standard and in accordance with established procedures
- 1.3** Risk control measures are identified, prioritised and evaluated against the work schedule
- 1.4** Relevant requirements and established procedures for the work are communicated to all personnel and

identified for all worksites

- 1.5 Hazards are identified, work health and safety (WHS)/occupational health and safety (OHS) risks assessed and control measures prioritised, implemented and monitored, including emergency exits kept clear, to ensure safe systems of work are followed and according to established procedures
- 1.6 Relevant work permits are secured to coordinate the performance of work according to requirements and/or established procedures
- 1.7 Resources, including personnel, equipment, tools and personal protective equipment (PPE) required for the job are identified, scheduled and coordinated and confirmed safe and in technical working order
- 1.8 Clients/customers are provided with possible solutions and/or options within the scope, acceptable cost and requirements
- 1.9 Personnel participating in the work, including plant operators and contractors, are fully briefed and respective responsibilities coordinated and authorised where applicable in accordance with established procedures
- 1.10 Liaison and communication issues with other/authorised personnel, authorities, clients and land owners are resolved and activities coordinated to carry out work

## **2 Carry out the development of HV switching schedules**

- 2.1 WHS/OHS and sustainable energy principles and practices to reduce the incidents of accidents and minimise waste are monitored and actioned in accordance with requirements and/or established procedures
- 2.2 Hazard warnings and safety signs are recognised and hazards and assessed WHS/OHS risks reported to immediate authorised personnel for directions according to established procedures
- 2.3 Remedial actions are taken to overcome any shortfalls encountered in the work schedule according to requirements and/or established procedures
- 2.4 Development of HV switching schedules is carried out in accordance with the work schedule and requirements

and/or established procedures

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| <p><b>2.5</b></p>                                              | Essential knowledge and associated skills are applied in the safe development of HV switching schedules to ensure completion in an agreed timeframe and to quality standards with a minimum of waste according to requirements                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p><b>2.6</b></p>                                              | Solutions to non-routine problems are identified and actioned using acquired essential knowledge and associated skills according to requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>2.7</b></p>                                              | Ongoing checks of quality of the work are undertaken in accordance with requirements and established procedures to ensure a quality outcome is achieved for the client/customer and to a community/industry standard                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <p><b>3 Complete development of HV switching schedules</b></p> | <p><b>3.1</b> Work undertaken is checked against work schedule for conformance with requirements, anomalies reported and solutions identified in accordance with established procedures</p> <p><b>3.2</b> Accidents and/or injuries are reported and followed up in accordance with requirements/established procedures</p> <p><b>3.3</b> Relevant work permits are signed off and plant is returned to service and client/customer advised in accordance with requirements</p> <p><b>3.4</b> Work completion records, reports, as installed/modified drawings and/or documentation and information are confirmed, processed and appropriate personnel notified</p> |

## 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 UETTDRIS48A Develop high voltage switching 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>