



Australian Government

UETTD RIS35 Perform remote community network field switching to a given schedule

Release: 1

UETTDRI35 Perform remote community network field switching 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 remote community network field switching to a given schedule in the electricity supply industry (ESI).

It includes preparing, performing and completing low voltage (LV) field switching to a given schedule, using circuit breaking and isolation devices.

It also includes using LV distribution systems in remote community situations, communicating with relevant personnel, isolating electrical equipment, paralleling circuits, proving the area is de-energised and earthed, issuing/accepting electrical permits and returning affected circuits to service.

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 requirements which must be confirmed prior to commencing this unit.

Pre-requisite Unit

Common Unit Group

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

UEENEEE102A Fabricate, assemble and dismantle utilities industry components

UEENEEE105A Fix and secure electrotechnology equipment

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

UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work

UEENEEK101A Maintain safety and tidiness of remote area power supply systems

UEENEEK102A Work safely with remote area power supply systems

UETTDREL12 Operate plant and equipment near live electrical conductors and apparatus

Competency Field

Industry Specific Cross Discipline

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for LV field switching to a given schedule

PERFORMANCE CRITERIA

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

- 1.1** Switching and work schedules, construction 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 LV 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 assessed and control measures identified in accordance with workplace procedures
- 1.6** Relevant authorisation is obtained to perform work in accordance with job requirements and workplace procedures
- 1.7** Plant, equipment, tools and personal protective equipment (PPE) required for work are 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

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| | 1.9 | Traffic management plan is confirmed as being applied in accordance with workplace procedures |
| 2 Carry out LV field switching to a 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 | LV field switching to a given schedule are applied 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 the isolation operation in accordance with workplace procedures |
| | 2.5 | Electrical equipment, associated circuits, line/network or worksite to be switched, including paralleling, is isolated and proved de-energised using appropriate devices and earthed, where required, in accordance with requirements and established procedures |
| | 2.6 | Unplanned events occurring during LV field switching to a given schedule are responded to in accordance with workplace procedures |
| | 2.7 | Quality checks of work are undertaken in accordance with workplace procedures |
| 3 Complete LV field switching to a given schedule | 3.1 | Completed work is checked against switching 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 are, where appropriate, cleaned, checked and returned to storage in accordance with workplace procedures |

- 3.5 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 UETTDNIS35A Perform remote community network field switching 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>

Assessment Requirements for UETTDRIS35 Perform remote community network field switching to a given schedule

Modification History

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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
- performing the following:
 - approvals/clearances
 - access authority/permits
- using any two (2) of the following specialist testing devices:
 - voltage detectors
 - polarity testers
 - phase rotation indicators
- operating low voltage (LV) switchgear, including any one (1) of the following:
 - LV links
 - LV bridges
 - LV fuses
- 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:

- legislation, standards, codes, supply authority regulations and/or enterprise requirements applicable to system switching
- requirements for the use of manuals, system diagrams/plans and drawings, including:
 - types, characteristics and capabilities of electrical apparatus
 - use, characteristics and capabilities of specialised tools and testing equipment
 - LV network interconnectors for alternate sources of supply and possible back-feed
 - high voltage (HV) network interconnectors source of possible back-feed

- procedures for obtaining correct LV switching authorisation, including:
 - identification of hazards, assessing and controlling risks
 - safety procedures and precautions
 - safe approach distances
 - responsibilities and protocols
 - identifying switching resources
 - procedures for obtaining electrical access permits/authorities
 - requirements for team switching
 - procedures for coordination of operations
- techniques in LV system switching, including:
 - isolation procedures and proving dead
 - pre-switching checks
 - switching operational procedures
 - emergency fault procedures
 - energisation procedures
- role of the HV switching operator
- procedures for obtaining correct HV switching authorisation, including:
 - identification of WHS/OHS hazards, and assessing and controlling risks
 - safety procedures and precautions
 - safe approach distances
 - responsibilities and protocols
 - identifying switching resources
 - procedures for obtaining electrical access permits/authorities
 - requirements for team switching
 - procedures for coordination of operations
- use and operation of equipment associated with HV overhead and substation equipment, including:
 - test instruments
 - sticks
 - interrupters
 - arc strangles
- operation of protection systems and substation equipment, such as:
 - fault levels and settings, types and applications, protection systems and substation equipment fault levels and settings, and types and applications
- types and categories of HV switchgear
- application, function and operating capabilities of switchgear
- restrictions pertaining to HV switching equipment
- procedures for the isolation of HV transmission main and working earths
- earthing HV electrical apparatus practices and procedures for access, including:
 - purposes of operational and additional work part - on-site earths

- factors determining the location and effectiveness of operational earthing
- acceptable industry procedures
- personal protective equipment (PPE)
- HV switching techniques, including:
 - pre-switching checks
 - switching operational procedures
 - isolation procedures and proving dead/de-energised
 - earthing procedures
 - emergency fault procedures
 - energisation procedures
- application and function of single wire earth return (SWER) system components, including:
 - circuit arrangement
 - principle of operation
 - hazards and procedures associated with faulty SWER earth systems
 - procedure to isolate, energise and commission SWER substations
- operation of HV overhead switching or indicating devices, including:
 - identifying hazards, assessing and controlling risks associated with HV switchgear operation
 - systematic and defensive techniques
 - mobile radio procedures
 - double isolation procedures
 - fuses, disconnect fuses, load switching, live line indicators, capacitors, reclosers, sectionalisers, underslung links, airbreaks, switches, disconnects, live line clamps, phasing sticks and phasing tester.

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 PPE currently used in industry for performing remote community network field switching to a given schedule

- applicable documentation, including workplace procedures, relevant industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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