



Australian Government

UETDRIS018 Perform low voltage field switching operation to a given schedule

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 2.0.

Application

This unit involves the skills and knowledge required to perform low voltage (LV) field switching operation to a given schedule in the electricity supply industry (ESI).

It includes isolating, paralleling and restoring LV overhead and underground electricity networks using circuit breaking and isolating equipment.

It also includes the approval process, using specialist tools, personal protective equipment (PPE), testing, short circuiting for switching and preparing, issuing and cancelling work permits.

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

Other conditions may also apply under state and territory legislative and regulatory licensing requirements which must be confirmed prior to commencing this unit.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in single path circuits

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEEEL0020 Solve problems in low voltage a.c. circuits

UEEEL0021 Solve problems in magnetic and electromagnetic devices

UETDREL001 Apply environmental requirements

UETDREL005 Work safely in the vicinity of live electrical apparatus

Competency Field

Industry Specific Cross Discipline

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

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

1 Prepare for LV field switching

- 1.1 Legislation, regulations, standards, codes of practice and organisational workplace requirements for the work to be performed are referred to and confirmed
- 1.2 Switching schedule is obtained and confirmed in accordance with workplace requirements
- 1.3 Plant, tools, equipment and PPE required for work are determined, obtained and confirmed in working order
- 1.4 Hazards are identified, risks assessed and control measures identified and applied
- 1.5 Work is prioritised and sequenced for completion in accordance with switching schedule and workplace requirements
- 1.6 Work permit/approval is organised in accordance with workplace requirements
- 1.7 Worksite is prepared in accordance with workplace requirements

2 Carry out LV field switching

- 2.1 Legislation, regulations, standards, codes of practice and organisational workplace requirements for the work to be performed are applied and monitored
- 2.2 Lifting, climbing, working at heights and the use of plant, tools, equipment and PPE are carried out in accordance with workplace requirements
- 2.3 Hazard control measures are monitored in accordance with workplace requirements
- 2.4 Communication with switching controller is established and maintained during switching in accordance with workplace requirements

- 2.5 Approval is obtained to commence LV field switching in accordance with switching schedule and workplace requirements
- 2.6 LV field switching is performed to isolate supply in accordance with the switching schedule and workplace requirements
- 2.7 Work permit is written and issued in accordance with the switching schedule and workplace requirements
- 2.8 Work permit is cancelled or relinquished in accordance with workplace requirements
- 2.9 Approval is obtained to commence restoration of LV supply in accordance with switching schedule and workplace requirements
- 2.10 LV field switching is performed to restore supply in accordance with the switching schedule and workplace requirements
- 2.11 Switching controller is notified LV restoration has been completed in accordance with switching schedule and workplace requirements
- 2.12 Incidents or unplanned events are responded to in accordance with workplace requirements

3 Complete work and documentation

- 3.1 Incidents or unplanned events are reported in accordance with workplace requirements
- 3.2 Worksite is rehabilitated, cleaned and made safe in accordance with workplace requirements
- 3.3 Plant, tools and equipment are cleaned, checked and returned to storage in accordance with workplace requirements
- 3.4 Work records, reports and documentation are completed in accordance with workplace requirements

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 UET Transmission, Distribution and Rail Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UETTDNIS43 Perform low voltage field switching operation to a given schedule.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>

Assessment Requirements for UETDRIS018 Perform low voltage field switching operation 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 legislation, regulations, standards, codes of practice and organisational workplace requirements, including:
 - work health and safety (WHS)/occupational health and safety (OHS)
- identifying hazards, assessing risks, identifying, applying and monitoring control measures
- obtaining, inspecting and using relevant personal protective equipment (PPE)
- verifying switching scheduling documents
- establishing and maintaining communications with the following:
 - switching controller
 - permit holders
 - other network stakeholders
- obtaining approval to perform low voltage (LV) field switching to a given schedule
- performing LV field switching operation to a given schedule completing at least two (2) of the following:
 - isolation
 - restoration
 - paralleling
- performing at least two (2) of the following tests:
 - proved de-energised*
 - voltage
 - current
 - phasing
 - (*must do)
- operating at least two (2) of the following:
 - LV links
 - LV fuses
 - LV circuit breakers
- using at least one (1) of the following:

- short circuiting equipment
- operating sticks
- using tags and locks
- organising, issuing, cancelling or relinquishing relevant work permits/approvals in accordance with workplace requirements
- dealing with an unplanned event on at least one (1) occasion
- completing relevant work records, reports and documentation.

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:

- relevant legislation, regulations, standards, codes of practice and organisational workplace requirements, including:
 - WHS/OHS
 - safe approach distances
- hazard, risk assessment and risk control requirements, including potential hazards
- types and application of PPE
- safe use of plant, tools and equipment
- application, purpose and types of permits
- events constituting an unplanned event or incident
- procedures for responding to an unplanned event or incident
- types, characteristics and capabilities of specialised tools and testing equipment
- purpose, layout and application of switching schedules
- LV field switching principles and procedures, including:
 - roles and responsibilities
 - procedures for coordination of operations
 - isolation, restoration and paralleling
 - proving de-energised
 - short circuiting
 - pre- and post-switching checks
 - fault finding
 - alternate sources of supply and possible back-feed
 - emergency fault procedures
- electrical operating/LV network diagrams and characteristics
- communication procedures
- danger tag and lockout procedures
- types, characteristics and capabilities of electrical apparatus used as a LV isolation points.

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 materials, tools, facilities, equipment and PPE currently used in industry for performing low voltage field switching operation to a given schedule
- applicable documentation, including workplace requirements, relevant industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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