



Australian Government

UETDRRC006 Perform low voltage electricity network switching in a very remote community

Release: 1

UETDRRC006 Perform low voltage electricity network switching in a very remote community

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) electricity network switching in a very remote community in the electricity supply industry (ESI).

It includes preparing a switching schedule, isolating and restoring LV overhead and underground electricity networks to a given switching schedule using LV circuit breaking and isolation devices.

It also includes paralleling LV electrical network circuits, using specialist tools, personal protective equipment (PPE), earthing and testing equipment, and the use of work permits and authorisation protocols.

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

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

UETDREL001 Apply environmental requirements

UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus

UETDREL005 Work safely in the vicinity of live electrical apparatus

Competency Field

Remote Community

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

1 Prepare to perform LV electricity network 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** Work plan is obtained and confirmed in accordance with workplace requirements
- 1.3** Hazards are identified, risks assessed and control measures identified and applied
- 1.4** Plant, tools, equipment and PPE required for work are determined, obtained and confirmed in working order
- 1.5** Switching schedule is developed in accordance with work plan and workplace requirements
- 1.6** LV network switching is prioritised for completion in accordance with workplace requirements
- 1.7** LV network switching schedule is communicated with relevant personnel in accordance with workplace requirements

2 Perform isolation of LV electricity network

- 2.1** Legislation, regulations, standards, codes of practice and organisational workplace requirements for the work to be performed are applied and monitored
- 2.2** Authorisation is obtained to commence LV electricity network switching in accordance with switching schedule and workplace requirements
- 2.3** Lifting, climbing, working at heights and the use of plant, tools and equipment are carried out in accordance with workplace requirements
- 2.4** Hazard control measures are monitored in accordance with workplace requirements
- 2.5** LV electricity network is isolated in accordance with switching schedule
- 2.6** Communications are maintained with authorisation authority in accordance with workplace requirements

- 2.7 LV electricity network is tested to confirm de-energised and earthed/short circuited in accordance with switching schedule and workplace requirements
 - 2.8 Incidents or unplanned events are responded to in accordance with workplace requirements
 - 2.9 Work permits are received and signed in accordance with workplace requirements
 - 2.10 Authorisation authority is notified isolation is completed in accordance with switching schedule and workplace requirements
- 3 Perform restoration of LV electricity network**
 - 3.1 Work permits are signed off in accordance with switching schedule and workplace requirements
 - 3.2 Authorisation is obtained to commence restoration of LV electricity network in accordance with workplace requirements
 - 3.3 Lifting, climbing, working at heights and the use of plant, tools and equipment, are carried out in accordance with workplace requirements
 - 3.4 Restore LV electricity network in accordance with switching schedule
 - 3.5 Authorisation authority is notified restoration is completed in accordance with switching schedule and workplace requirements
- 4 Complete work and documentation**
 - 4.1 Completed work is checked for compliance against the work plan and workplace requirements
 - 4.2 Incidents or unplanned events are reported in accordance with workplace requirements
 - 4.3 Worksite is rehabilitated, cleaned and made safe in accordance with workplace requirements
 - 4.4 Plant, tools and equipment are cleaned, checked and returned to storage in accordance with workplace requirements
 - 4.5 Work records, reports and documentation are completed, and appropriate personnel notified 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 UETTDRIS35 Perform remote community network field switching 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 UETDRRC006 Perform low voltage electricity network switching in a very remote community

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:
 - relevant 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)
- obtaining and signing on and off relevant work permits in accordance with workplace requirements
- preparing a low voltage (LV) electricity network switching schedule in accordance with workplace requirements
- obtaining authorisation to perform LV electricity network switching
- isolating and restoring LV electricity networks in accordance with switching schedule requirements
- undertaking tests of LV electricity network, including:
 - voltage
 - phase sequence (rotation)
 - polarity
- operating LV switchgear, including at least one (1) of the following:
 - LV circuit breaker
 - LV links
 - LV fuses
- working from at least one (1) of the following:
 - elevated work platform (EWP)
 - ladder
- 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
- 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
- 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
 - restrictions pertaining to LV switching equipment
 - high voltage (HV) network interconnectors source of possible back-feed
- LV switchgear, including:
 - types
 - categories
 - application
 - function
 - operating capabilities
- types, characteristics and capabilities of LV specialised switching and testing equipment
- 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 for overhead and underground LV electricity network switching, including:
 - isolation procedures
 - testing and earthing/short circuiting LV electrical apparatus
 - pre-switching checks
 - switching operational procedures
 - emergency fault procedures
 - restoration procedures
- role and responsibilities of the LV switching operator

- application, function and operating capabilities of switchgear
- preparation of a LV switching schedule, including:
 - legislation, standards, codes, supply authority regulations and/or enterprise requirements applicable to switching sheet schedules
 - requirements for the use of manuals, system diagrams/plans and drawings - types, characteristics and capabilities of LV electrical equipment to be switched; isolation points and earthing; and responsibilities of the switching operator
 - techniques in writing switching schedules - sequence of switching operations, isolation procedures, earthing procedures and switching completion notification procedures
- events constituting an unplanned event or incident
- procedures for responding to an unplanned event or incident.

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 LV electricity network switching in a very remote community
- applicable documentation, including workplace requirements, relevant industry standards, equipment specifications, regulations, codes of practice and operation manuals.

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