



Australian Government

UETTD RIS65 Contribute to coordinated HV live working

Release: 1

UETTDRIS65 Contribute to coordinated HV live working

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 specifies the outcomes required of live line working team members to work effectively as a cohesive team to ensure safety of all team members and the community when undertaking high voltage (HV) live line work. It includes the pre-work briefing on tasks to be undertaken, roles of individual team members, identification of possible hazards, risk management analysis and implementation of palliative measures to control or mitigate the risk to acceptable levels. It also encompasses the monitoring of work performance to ensure safety, and the post-work debriefing to identify areas for continuous improvement.

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

There are no prerequisite competencies to this unit.

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 Plan to contribute to a coordinated HV live line work team

- 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 by the team
- 1.2** Relevant requirements and established procedures for the work are communicated to all team members and identified for all worksites
- 1.3** Work health and safety (WHS)/occupational health and safety (OHS) policies and procedures related to requirements and established procedures for the working on HV live lines are obtained and confirmed for the purposes of the work to be performed and discussed among all team members
- 1.4** Work is prioritised and sequenced following consultation with all team members to ensure safe systems of work are followed for completion within acceptable timeframes and in accordance with established procedures
- 1.5** WHS/OHS and live line work hazards are identified, risk assessments conducted and control measures identified, prioritised, implemented and documented against the work schedule, including the checking of site weather and environmental conditions, to ensure that live line work can be undertaken safely
- 1.6** Relevant live line work permits or authority for live line work are secured to coordinate the performance of work by the team 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** 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
- 1.9** Liaison and communication issues with others/authorised personnel, authorities, clients and land owners are resolved and activities coordinated to carry

out work

- 1.10** Site is prepared according to the work schedule and to minimise risk and damage to property, commerce and individuals in accordance with established procedures
- 1.11** All team members to be engaged in the work discuss and agree, without ambiguity, on their respective roles, and possible role changes during the course of work
- 1.12** Positioning of road signs, barriers and warning devices is planned and coordinated in accordance with requirements

2 Carry out the contribution to coordinated HV live line work

- 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, in particular, established live line working procedures are strictly adhered to
- 2.2** First aid, rescue and other related work procedures are performed according to requirements and/or established procedures
- 2.3** Lifting, climbing, working aloft, and use of power tools/equipment, techniques and practices, where applicable, are safely exercised according to requirements
- 2.4** Live line permits and other provisions for live line work are in place, as required, in accordance with requirements and established procedures
- 2.5** Essential knowledge and associated skills are applied in the safe contribution to coordinated HV live line work to ensure completion in an agreed timeframe and to quality standards with a minimum of waste according to requirements
- 2.6** Work is undertaken on HV live line in a team environment work according to the work schedule and requirements/established procedures
- 2.7** Work is shared among all team members in a coordinated manner as discussed and agreed during pre-work briefing
- 2.8** Hazard warnings and safety signs are recognised and hazards and assessed WHS/OHS risks discussed with

team members and reported to immediate authorised personnel for directions according to established procedures

2.9 Unplanned events in the maintenance of HV live line work are discussed among all team members and appropriate actions undertaken accordingly

2.10 Solutions to non-routine problems are identified and actioned using acquired essential knowledge and associated skills according to requirements

2.11 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

3 Complete the contribution to coordinated HV live line work

3.1 Work undertaken is checked against work schedule for conformance with requirements, anomalies reported and solutions identified in accordance with established procedures

3.2 Accidents and/or injuries are reported and followed up in accordance with requirements/established procedures

3.3 Worksite is rehabilitated, cleaned up and confirmed safe in accordance with established procedures

3.4 Tools, equipment and any surplus resources and materials are, where appropriate, cleaned, checked and returned to storage in accordance with established procedures

3.5 Relevant work permits are signed off and HV live line work is returned to service and client/customer advised in accordance with requirements

3.6 Works completion records, reports, as installed/modified drawings and/or documentation and information are confirmed, processed and appropriate personnel notified

3.7 Aspects of work schedule are discussed/identified via feedback with fellow team members and information on improvement forwarded to appropriate personnel according to established 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 UETTDRIS65A Contribute to coordinated HV live working.

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 UETTDRIS65 Contribute to coordinated HV live working

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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
- facilitating communication/consultation processes in a high voltage (HV) live line work team environment
- contributing to pre-work briefings and securing of live line permits or authority to work in a HV live line work team environment
- implementing WHS/OHS policies and procedures in a HV live line work team environment
- contributing to the work schedule in a HV live line work team environment
- contributing to feedback consultation on improving safe working in a HV live line work team environment
- 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:

- electrical safe working practices encompassing:
 - risk management and assessment of risk - principle and purpose of risk management and processes for conducting a risk assessment
 - hazards associated with low voltage (LV), extra-low voltage (ELV) and high currents - arrangement of power distribution and circuits in an electrical installation, parts of an electrical system and equipment that operate at LV and ELV, and parts of an electrical system and equipment where high currents are likely
 - risks and control measures associated with HV - parts of an electrical system and equipment that operate at HV, the terms ‘touch voltage’, ‘step voltage’, ‘induced voltage’ and ‘creepage’ as they relate to the hazards of HV, and control measures used for dealing with the hazards of HV
- optical fibre safety - coherent optical sources and joining procedures, and laser safety

class 3a devices or their replacement

- risks and control measures associated with LV - risks associated with modifying electrical installations; fault finding, maintenance and repair; control measures before, during and after working on electrical installations, circuits or equipment; isolation and tagging-off procedures; risks and restrictions in live work, and control measures for live work
- risks and control measures associated with harmful dusts and airborne contaminants - thermal insulation, fibrous cement materials, and asbestos and other fibre reinforced switchboard materials
- safety, selection, use, maintenance and care of test equipment - safety characteristics of electrical testing devices, safe use of electrical testing device, and checks and storage methods for maintaining the safety of testing devices
- powerline safety practices encompassing:
 - protective apparatus and apparel for linework - responsibilities for the selection, use, maintenance and storage of protective apparatus and apparel and the types of protective apparatus and apparel used for the line worker
 - requirements for the use of ladders - carrying, erecting, collapsing and lowering different types of extension ladder against a standing pole; maintenance checks on different types of ladders; renewal of extension ropes; and the safety issues relating to clearances from overhead conductors
 - requirements for climbing and working aloft - methods used to identify a pole is safe to climb; methods used to inspect a line worker's body belt; application of knots and hitches appropriate to the requirements of a line worker; height safety principles, including personal fall protection, prevention and related requirements; and the practical procedures of climbing an overhead structure and fitting a pole chair
 - traffic management - purpose of traffic management and a line worker's responsibilities in accordance with relevant statutory requirements and electricity supply industry (ESI) requirements, the procedure used to provide an effective traffic management scheme and the use of a two-way radio
 - control of small fires - identification, selection and operation of the appropriate extinguishing mediums for various types of fires; general fire prevention methods and the precautions for personal protection when fighting small fires
 - rescue victims from heights and confined spaces - planning and identifying procedures, establishing responses, developing techniques, involvement of external emergency services, and practical demonstration/rehearsals of rescuing a person from heights and from confined spaces and emergency procedures for the rescue of an electric shock victim, including cardiopulmonary resuscitation (CPR)
 - requirements for aerial linework - planning, establishing and implementing relevant aviation authority clearances; determining system requirements; aircrew familiarisation with network operations and equipment; and requirements for effective communications operations for aerial work
- principles of statutory and safety considerations encompassing:
 - Commonwealth/state/territory legislation, standards, codes, supply authority regulations and/or enterprise requirements associated with working on HV
 - particular reference to state and territory regulations regarding working near energised conductors, electrical access, heights, confined space, testing procedures and licensing

rules

- working safely up to the defined safe working zone near energised electrical apparatus, including electrical powerlines, for non-electrical worker encompassing:
 - standards, guidelines/codes of practice, state/territory/local government legislation, supply authority regulations and/or enterprise requirements, including relevant certification and licensing applicable to working safely up to the defined “safe working zone” near energised electrical apparatus, including electrical powerlines, for non-electrical worker
 - definitions of terminologies - ‘safe working zone’ ‘risk assessment’, ‘safe approach distances zones’, ‘safe working distances’. ‘work permits’, access authorisation permits’, ‘technical standards’ ‘isolation procedures’ and ‘compliance requirements’
 - WHS/OHS policies and procedures for working safely - emergency response and first aid procedures, such as CPR; roles and responsibilities of employers, employees and other parties under WHS/OHS legislation; personal protective equipment (PPE); identifying hazards; assessing and controlling WHS/OHS risks; first aid procedures; duties of a safety observer; working at heights/confined spaces; permit to work systems and isolation procedures
 - safe application of different types of tools and equipment
 - operation of mobile plant and machinery, such as elevated work platform (EWP) near live electrical apparatus
 - electricity supply infrastructure assets and voltages
 - techniques and precautions in undertaking different work functions and working safely up to the defined safe working zone near energised electrical apparatus, including electrical powerlines, for non-electrical worker - work functions, such as vegetation control, scaffolding, rigging, painting, and/or any other activity that requires working safely near live electrical apparatus by a non-electrical worker
- enterprise-specific policies and procedure instructions encompassing:
 - responsibilities and duty of care of employer and employee relationship
 - methods of obtaining the up-to-date information on enterprise policies and procedures
 - rules and regulations
 - induction into workplace - location of work area and storage area, timetable, uniform, personal wellbeing, housekeeping rules, emergency procedures and evacuation procedures
 - techniques when dealing with others - working in teams, customer relation, and complaint and issues procedures
 - overview of enterprise professional development - fire-fighting procedures, fatigue management, and training and competency development - understanding and promotion
- enterprise-specific WHS/OHS instructions encompassing:
 - standards, codes, legislation, supply authority regulations and specific enterprise regulations pertaining to WHS/OHS policies and procedures
 - methods of obtaining the up-to-date information on enterprise WHS/OHS policies and procedures
 - specific enterprise PPE - type and application; where and when to be used; method of replacement; responsibility of maintenance, including cleaning, inspection and testing;

- and emergency response, rescue, evacuation and first aid procedures
- personal wellbeing – hygiene, fatigue/stress management and drugs/alcohol
- WHS/OHS training - induction training, specific hazard training, specific task or equipment training, emergency and evacuation training, and training as part of broader programs, such as equipment operation
- WHS/OHS records - audits; inspection reports; workplace health and environmental monitoring records; training and instruction records; manufacturer and supplier information, such as material safety data sheets (MSDS); registers; maintenance reports; workers compensation and rehabilitation records; and first aid/medical records
- enterprise-specific specialised tools encompassing:
 - legislation, standards, codes, supply authority regulations and specific enterprise regulations pertaining to the use and care of specialised tools - voltage detectors, polarity testers and phase rotation
 - characteristics, capabilities and application of specialised tools for a particular job
 - safety policies, procedures and precautions with regards to using, transporting and storing specialised tools
 - selection methods for obtaining the correct specialised tool for the particular job, including during procurement, purchasing and/or hiring arrangements
 - techniques in pre-use inspection on the serviceability of specialised tools
 - techniques in the selection, use, maintenance, care and storage of specialised tools
 - identifying WHS/OHS hazards, assessing and controlling risks associated with their use
 - techniques for the safe use of specialised power tools
- enterprise-specific HV live line teamwork encompassing:
 - Commonwealth/state/territory legislation, standards, codes, supply authority regulations and/or enterprise requirements associated with working on HV live lines
 - safety precautions working on energised live lines when working in teams - live line minimum approach distances for person and plant; WHS/OHS hazards and precautions; identification of WHS/OHS hazards; assessing and controlling risks; types, selection, maintenance, storage and uses of PPE; live line access authority/permit system; disabling auto-reclosing function; ensuring functioning of fault current protective devices and checking integrity of insulation prior to work commencement
 - types and functions of specialised live line working equipment and tools and inspection techniques prior to use
 - safe working policies, procedures and practices when using and operating specialised equipment and tools
 - methods of using specialised equipment and tools
 - use of safety observers
 - emergency response and rescue, including first aid
 - relationship and responsibilities of each team member - roles of individuals in the team, contribution to joint outcome, goals/plans and objectives of the team
 - work team communication - techniques in effective communication, techniques in effective teamwork and dangers of ineffective teamwork.

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, equipment and PPE currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

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