Skills and Training Guideline

This guideline has been developed by the Victorian Electricity Supply Industry (VESI) Skills and Training Reference Committee (STRC)

In the Victorian Electricity Supply Industry

May 2016

DATE	VERSION	AMENDMENT	NAME
November 2008	1	Original	STRC
December 2010	2	Inclusion of National Competency Standard Units (CSU's) Reviewed and updated the VESI training modules Updated the introduction section	STRC
December 2011	3	Renamed and re - formatted the original Electricity Network Operator Training & Assessment Requirements document. Incorporation of requirements for: - • the VESI Skills and training matrix • Qualifications and Licencing / Registration • Training Frequency • Skills and Training Matrix Role Descriptions Reviewed and revised training modules Added CSU Working safely near live electrical apparatus as non-electrical worker - UETTDREL04B Revised Live Low Voltage (LV) Work - Cable Jointing training module Update to the VESI Skills and Training matrix to include: • New roles for Communications worker, Rigger, Trade Assistant and Vegetation Tree climber • CSU UETTDREL04B - Working Safely near live electrical apparatus as non electrical worker • Notes 10 – 14 to clarify roles and training requirements	STRC

DATE	VERSION	AMENDMENT	NAME
JULY 2012	4	Added the following training modules previously in the VESI HV Live work rules: • High Voltage live work pole replacement for Pole Erection Recovery Unit operators • Limited High Voltage Live Work (Vegetation Control) Changed Servicing procedures module name to the new National Competency Standard Unit, Testing of connections to low voltage electricity networks – UETTDRRF11A Incorporated the training requirements for Confined space Updated the Traffic management modules to meet new Vic Road training requirements • RIIOHS205A Control traffic with a stop/slow bat • RIIOHS302A Implement traffic management plan or equivalent Changed National Qualification and Competency Standard Unit (CSU) names and unit numbers to reflect the change to the UET 12 National Training package in this Guideline and the Skills & Training Matrix. Added prerequisite requirements for all HV switching modules Added reference to the VESI Minimum Rules for Carrying out HV Live Work for competency assessment timeframes Added note 16 to the Skills and training matrix in regards to HV switching Authorisation training	STRC
November 2013	5	**Training Matrix** Added aerial rescue for tree climbers Included switching classes to note 16 Included No Go Assessor role and training module Included Jemena to note 6 in regards to SWER **Training Guideline** Changed the name and updated references for The Blue Book and The Green Book Separated section 5 Qualifications and Licensing / Registration Included paragraph in regards to the requirements when the VESI update National Qualification and Competencies and there unit numbers. Added Definitions for The Blue Book and The Green Book Added No Go Zone assessor to Appendix 1 – Skills and Training Matrix Role Descriptions Added new competency unit - Undertake release and rescue from a tree near live electrical apparatus - UETTDRVC34A Added new Learning outcome 1 to Safe Approach Distance module	STRC

DATE	VERSION	AMENDMENT	NAME
November 2014	6	**Training Guideline** Created section 4.1 Apprentices and trainees. Added the minimum access requirements for new apprentices and Trainees when initial VESI training is delayed. Updated the Testing of connections to low voltage electricity networks delivery requirements and added table 1 outlining the required testing procedures for applicable roles. Revised the wording for the PPE requirements throughout the document for consistency Added new training modules; Measuring Conductor heights using Telescopic measuring sticks, Special Reader and Making LV Dead Added new learning outcomes for Conductive structures into modules Live Low Voltage (LV) Work - Cable Jointing and Ground work Removed Learning outcome 3 Isolate, make dead and restore supply to a section of LV apparatus from Live Low Voltage (LV) Work – Overhead module due to the creation of new module making LV Dead **Training Matrix** Made Testing of Connections mandatory for the electrical inspector role Updated CSU Numbers for the first aid units Added Testing of connections for Electrical inspectors Added training module – Making LV Dead Added training module - Measuring Conductor Heights Using Telescopic Measuring Sticks	STRC
May 2016	7	**Training Guideline** Added new Vegetation role descriptions for Assessor and Specialist Plant Operator Added paragraph in clause 5 Qualifications in regards to Interstate workers Added Note in Training and Assessment Requirements. Records that indicate attendance only will not be accepted Added references to the following VESI documents that support this Guideline: Apprentice / Trainee Supervision, Interstate, Overseas and Re-entry Guidelines Changed module name from High Voltage live work pole replacement for Pole Erection Recovery Unit operators to High Voltage Live Work - Pole Erection Recovery Unit (PERU) Operator Created new module, High Voltage Live Work - Vehicle Mounted Crane Operator Created new module, Safe Approach Distance – Vegetation Work Added LV Perform low voltage switching operation to a given schedule – UETTDRIS43A as a prerequisite for HV Switching RSO, DSO and DS	STRC

		Added note for Safe Approach Distances, Learning outcome 3 is only required for workers undertaking overhead work Updated Traffic Management training requirements to specify CSU: Control traffic with stop-slow bat - RIIWHS205D, Traffic Management: Implement traffic management plan - RIIWHS302D Minor changes to the Assessment criteria in the Authority modules	
		Training Matrix Changed module name to High Voltage Live Work - Pole Erection Recovery Unit (PERU) Operator and added Note 11 Updated Traffic Management training requirements to specify the Competency Standard Units Updated the Certificate II in Asset inspection to the National Competency Standard Unit Code Added Lay ESI Cables as an Additional requirement for the Civil Worker role when undertaking Cable Hauling, refer to Note 10 Added Make Application for as Additional for the No Go Zone Assessor role Added Making LV Dead as Additional for the HV Switching Operator (Distribution) role Added training module - High Voltage Live Work - Vehicle Mounted Crane Operator, refer to Note 11 for the Plant Operator role Removed Lineworker Registration, applications will still be processed by Network Operators upon receipt, information on the Registration process is available on the ESV website Removed the Vegetation Worker roles from the matrix and included a note to refer to the VESI Vegetation Management Guideline for all Vegetation training requirements Removed Standard (AMI) Electrical Meter Installation 22001VIC in the Qualification section Removed the role of Cable Jointer (Restricted) and added Note 7 Removed LV Cable Jointing Certificate in the Qualification section Reordered the Notes to align with a logical order in the Matrix	

Contents

1. INTRODUCTION 7
2. PURPOSE 7
3. SCOPE 7
4. VESI SKILLS AND TRAINING MATRIX 7
4.1 APPRENTICES & TRAINEES 8
5. QUALIFICATIONS 8
6. LICENCING / REGISTRATION 9
6.1 HIGH RISK LICENCING 9
7. DELIVERY OF TRAINING 9
8. TRAINING AND ASSESSMENT REQUIREMENTS 10
9. TRAINING FREQUENCY 10
10. PASSPORT 10
11. CONTINUOUS IMPROVEMENT 11
12. DEFINITIONS 11
13. REFERENCES 11

APPENDIX 1 – SKILLS AND TRAINING MATRIX ROLE DESCRIPTIONS 12

APPENDIX 2 – TRAINING MODULES / COMPETENCY STANDARD UNIT 14

ATTACHED CLIMBING FOR TOWER WORK 14

CABLE PIT / TRENCH / EXCAVATION RESCUE - UETDRRF07B 16

CPR – HLTAID001 16

EWP CONTROLLED DESCENT ESCAPE - UETTDRRF08B 16

EWP RESCUE – UETTDRRF03B 17

FIRST AID IN AN ESI ENVIRONMENT - UETTDRRF10B 17

HIGH VOLTAGE LIVE WORK - POLE ERECTION RECOVERY UNIT (PERU) OPERATOR 18

HIGH VOLTAGE LIVE WORK - VEHICLE MOUNTED CRANE OPERATOR 20

LIMITED HIGH VOLTAGE LIVE WORK (VEGETATION CONTROL) 22

LIVE LV PANEL RESCUE - UETTDRRF06B 25

MAINTAIN ENERGISED HIGH VOLTAGE DISTRIBUTION OVERHEAD ELECTRICAL APPARATUS (GLOVE) – UETTDRDP14A 25

MAINTAIN ENERGISED HIGH VOLTAGE DISTRIBUTION OVERHEAD ELECTRICAL APPARATUS (STICK) – UETTDRDP13A 25

MAINTAIN ENERGISED TRANSMISSION LINES USING HIGH VOLTAGE LIVE WORK BAREHAND METHOD - UETTDRTP32A 26

MAINTAIN ENERGISED TRANSMISSION LINES USING HIGH VOLTAGE LIVE WORK STICK METHOD - UETTDRTP31A 26

POLE TOP RESCUE - UETTDRRF02B 26

SAFE APPROACH DISTANCES 27

SAFE APPROACH DISTANCE – VEGETATION WORK 29
TESTING OF CONNECTIONS TO LOW VOLTAGE ELECTRICITY NETWORKS – UETTDRRF11A (SERVICING PROCEDURES) 31
SWITCHYARD STRUCTURES AT HEIGHTS RESCUE - UETTDRRF05B 36
TOWER RESCUE - UETTDRRF04B 36
UNDERTAKE RELEASE AND RESCUE FROM A TREE NEAR LIVE ELECTRICAL APPARATUS - UETTDRVC34A 36
APPLY ACCESS PROCEDURES TO WORK ON OR NEAR ELECTRICAL NETWORK INFRASTRUCTURE - UETTDRRF09B (RECEIVE ACCESS PERMITS) 37
CONFINED SPACES 40
ENTER ENCLOSURES 41
HIGH VOLTAGE (HV) SWITCHING – RSO (RESTRICTED SWITCHING OVERHEAD) 43
HIGH VOLTAGE (HV) SWITCHING – DSO (DISTRIBUTION SWITCHING OVERHEAD) 49
HIGH VOLTAGE (HV) SWITCHING – DS (DISTRIBUTION SWITCHING) 54
HIGH VOLTAGE (HV) SWITCHING – ZSS (ZONE SUBSTATION SWITCHING) 59
HIGH VOLTAGE (HV) SWITCHING – TSF (TERMINAL SWITCHING FEEDERS) 64
HIGH VOLTAGE (HV) SWITCHING – TS (TERMINAL SWITCHING) 69
LIVE LOW VOLTAGE (LV) WORK - CABLE JOINTING 74
LIVE LOW VOLTAGE (LV) WORK – GROUND LEVEL 77
LIVE LOW VOLTAGE (LV) WORK - OVERHEAD 79
MAKE APPLICATION FOR 82
MAKING LV DEAD 85
MANUAL HANDLING 87
MEASURING CONDUCTOR HEIGHTS USING TELESCOPIC MEASURING STICKS 88
NO GO ZONE ASSESSOR 90
RECEIVE SANCTION FOR TESTING 91
SAFE TO APPROACH SWER 93
SAFE TO CLIMB 94
TRAFFIC MANAGEMENT: CONTROL TRAFFIC WITH STOP-SLOW BAT - RIIWHS205D 96
TRAFFIC MANAGEMENT: IMPLEMENT TRAFFIC MANAGEMENT PLAN - RIIWHS302D 96
VESI ENVIRONMENTAL FRAMEWORK 97
VESI SAFETY FRAMEWORK 100
WASH HV INSULATORS 103
APPLY ESI SAFETY RULES, CODES OF PRACTICE AND PROCEDURES FOR WORK ON OR NEAR ELECTRICAL APPARATUS - UETTDRRF01B 103
WORKING SAFELY NEAR LIVE ELECTRICAL APPARATUS AS A NON-ELECTRICAL WORKER - UETTDREL14A 103
SPECIAL READER 104

1. Introduction

The Victorian Electricity Supply Industry (VESI) Skills and Training Guideline has been developed to establish the minimum standards for Qualifications and Competency Assessment / Refresher Training for Field personnel working in the VESI.

2. Purpose

The purpose of the VESI Skills and Training Guideline is to:

- provide an agreed standard common to all VESI Network Operators
- specify the minimum Qualification and Competency Assessment / Refresher Training requirements for access to the VESI Electrical Networks
- provide an agreed set of learning outcomes and assessment criteria for VESI specified training and where applicable be consistent with Nationally endorsed Competency Standard Units (CSU's)

3. Scope

This guideline applies to employers, contractors and sub-contractors working on the Distribution & Transmission Networks in Victoria.

4. VESI Skills and Training Matrix

The VESI Skills & Training Matrix is the minimum Qualification and Competency Assessment / Refresher Training requirements for VESI workers working on or near Distribution & Transmission Networks in Victoria. This Matrix and any specific Network Operator requirements shall be referenced whenever training is required for existing or new personnel. The requirements outlined in this guideline and the VESI Skills & Training Matrix are the VESI minimum standard and therefore, applies to Network Operators their Contractors and Sub-contractors. All training shall be in place prior to work being performed unless specified by the Network Operator.

Where there is a change in a National Qualification and/or Competency Standard Unit name or code the VESI Skills & Training Matrix will be updated to reflect this change. RTO's are required to update their scope of registration to meet Australian Qualification Framework (AQF) requirements including teach out timeframes. Previous National Qualifications and Competency Standard Unit equivalents will still be recognised and where the training requires Competency Assessment / Refresher training, this assessment / training will meet the requirements of the new or updated unit.

Network Operators may determine further Competency Assessment / Refresher training, authorisations and induction requirements for a specific work activity or work group.

The roles identified in the VESI Skills and Training Matrix are commonly used in the VESI. The descriptions of the roles are identified in Appendix 1 of this guideline.

Where training is required for roles not identified in the matrix or where additional tasks have been identified or modules are not required due to the task being performed the training requirements should be established in consultation with the Network Operator.

Where a person performs multiple roles (e.g. Lineworker, HV switching Operator) they shall undertake the mandatory training for each of those roles.

4.1 Apprentices & Trainees

It is acknowledged by the STRC that initial training for Apprentices and Trainees may not start for a period of time after employment.

VESI specific training for the role may normally be incorporated in this initial training (e.g. Lineworker) and therefore may lead to a delay in the apprentice / Trainee having the required competencies to access the field.

Where VESI mandatory training is not incorporated in the initial / Tafe training for the role (e.g. Electrician, Protection Tester), the VESI training shall be completed within two months of employment.

In these circumstances to enable the apprentice and/or trainee to enter the field under direct supervision the Minimum Access Requirements below shall be adhered to until the required VESI training is completed.

At all times during the term of an Apprenticeship / Traineeship, the Apprentice / Trainee shall be under Direct, General or Broad Supervision as defined in the VESI Supervision Guidelines for the applicable role.

Minimum Access Requirements

- Have completed training in the National competency - Work safely in the construction industry (White card or equivalent) - CPCCOHS1001A
- Hold an Australian ESI Skills Passport
- Undertake a Network Operator Induction
- Shall not undertake any task (e.g. working aloft in an EWP) until the required VESI mandatory training is completed (e.g. EWP escape).
- Shall not work in the vicinity of live apparatus
- Be under the Direct Supervision of a trade worker at all times

After having successfully completed the initial training, it is the responsibility of the employer to ensure that Apprentices / Trainees complete the Competency Assessment / Refresher Training applicable to their role as per the VESI Skills and Training Matrix.

5. Qualifications

All personnel shall be Qualified for the functional role they are undertaking. All Qualifications should meet the Australian Qualification Framework (AQF) requirements or equivalent (Refer to the applicable VESI Qualification evidence Guide). For the evidence to be equivalent it shall consist of a record of qualification previously issued by a State Government or Enterprise e.g. SECV that was applicable in that jurisdiction (may include evidence of training results and/or work history). This evidence of qualification shall be reviewed and verified by the Network Operator.

Where a Qualification has been gained in another State or Overseas the employer shall follow the requirements of the VESI Interstate Worker or the VESI Overseas Worker Guideline prior to requesting approval to work on the Network.

Employers engaging Interstate and Overseas workers shall ensure that the person is conversant with any applicable Victorian Acts, Regulations, Codes of Practice, Safety Rules, Industry Guidelines and Asset Identification.

For those workers re-entering the industry as a qualified field worker after an extended period of more than 5 years they shall follow the requirements of the VESI Re-entry Guideline.

Under no circumstances shall non-qualified persons undertake work that requires a Qualification.

6. Licencing / Registration

All personnel shall be Licenced or Registered for the work activity they are undertaking, if required. Electrical Licencing and Registration is administered by Energy Safe Victoria (ESV). Refer to the ESV website for Licencing information.

Applications for the Registration of Lineworkers must be accompanied by a letter of support from the Network Operator the Lineworker will predominantly work. Applications for registration shall be sent to the Network Operator and shall include the following information:

- ESV Registration application form
- Copy of qualification (should include Statement of Attainment with results)

6.1 High Risk Licencing

A licence to perform high risk work is required when operating plant and equipment considered being high risk and are not covered in this guideline. Such licences are administered by WorkSafe Victoria. It is expected that only licence holders operate plant or perform tasks that are stipulated by a high risk licence. As the licence has an expiry date, all licences must be current prior to work on or near the network.

7. Delivery of Training

The following guidelines shall be applied:

- All initial National Competency Standard Units shall be delivered by a Registered Training Organisation (RTO) whose scope of registration includes the required competencies and is able to demonstrate vocational competence and experience in the subject matter. All RTO's shall compliance with all components of the Vocational Education and Training (VET) Quality Framework set out by the national regulator.
- Competency Assessment / Refresher training can be delivered by persons with a valid Certificate IV in Training and Assessment (or a diploma or higher level qualification in adult education) with the vocational competencies at least to the level being delivered and assessed except where specified in the Training Modules in Appendix 2.
- Training which is not nationally endorsed shall be delivered by a person who holds as a minimum a valid Certificate IV in Training and Assessment (or a diploma or higher level qualification in adult education) and is able to demonstrate vocational competence and experience in the subject matter of the training they are delivering.

Where the Assessment criteria refers to a VESI document (e.g. Fieldworker Handbook), Network Operator or Employer procedure; that document or procedure should be utilised. Employers should ensure: -

- That the training provider they engage is familiar with all such procedures.
- Training providers include reference to the appropriate procedures in there training delivery.

8. Training and Assessment Requirements

The STRC has established standard training and assessment requirements for the training identified in the VESI Skills and Training matrix. The selection of National Competencies and modules in Appendix 2 is based on an individual's role and relative to the nature of work performed and authorisations held by the individual.

The training modules are written for Competency Assessment / Refresher Training and where identified the module can be used for initial training. The competency assessment should include all assessment criteria with the exception of those modules identified in the VESI Skills and Training Matrix.

Where a module descriptor or CSU is used for initial training, consideration shall be given to other pre-requisites / competencies required to undertake the task safely.

Where a National Competency Standard Unit is identified in this guideline / matrix for initial training a statement of attainment shall be issued by the RTO. This evidence shall be provided to the Network Operator but there may be circumstances where alternate evidence is acceptable e.g. Work safely in the Construction industry (white/red card).

Where Competency Assessment / Refresher Training are based on a Competency Standard Unit or a VESI training module the evidence required is a training record. This could include a current copy of a training report, or a copy of the passport record, or a Statement of Attainment. This evidence shall include the following:

- Individual's Name
- Training Provider Name
- Training course name as per the VESI Skills and Training Matrix
- Date competency verified
- Trainer and/or Training Provider signature

Notes: Records that indicate attendance only will not be accepted.

A Statement of Attainment is required for initial training of a Competency Standard unit

9. Training Frequency

The training listed in the VESI Skills and Training matrix shall be current at all times and each subject shall be re-assessed prior to the frequency specified.

Where training cannot be achieved within the designated timeframe Network Operator processes shall be followed.

10. Passport

The Australian ESI Skills Passport is a mechanism to record training, assessment, Network authorities and inductions undertaken in the ESI.

The passport is the nationally agreed system of recording field related training for field and office based personnel. For further information refer to the Rules & Administration for the Australian Electricity Supply Industry (ESI) Skills Passport. www.esipassport.com.au

An Australian ESI Skills Passports (Passport) shall be issued to any ESI worker who:

- holds an authority issued by a Network Operator; and/or
- is required by a Network Operator to undertake any training and/or assessment for field based activities.

All employers will ensure that their employee's, contractors and sub-contractors who meet these criteria have been issued a Passport by a Network Operator.

Guidance for the recording of training and authorisations in the passport can be found at http://www.vesi.com.au/Committees/Skills-and-Training/Passport.aspx

11. Continuous Improvement

Suggestions for improvement to this guideline can be submitted via the Contact Us link on the VESI Skills and Training webpage. Suggestions will be considered by the STRC for incorporation.

Any changes to this document can only be made by consensus agreement between the Network Operators.

12. Definitions

Personnel	Employees, Contractors and Sub-contractors of a Network Operator.
Refresher training	Training to compensate for or prevent deterioration in a previously achieved standard of performance. Usually undertaken at a set frequency.
Telecommunication corridor	The area greater than 1000mm below bare overhead LV Network Operator assets or 2000mm below bare overhead HV Network Operator assets
The Blue Book	CODE OF PRACTICE on electrical safety for the work on or near high voltage electrical apparatus The Blue Book Victoria 2012
The Green Book	The Green Book 2013 Electrical Safety Rules for the VESI Distribution Networks

13. References

VESI Skills & Training Matrix

VESI Apprentice and Trainee Supervision Guidelines

VESI Interstate Guideline

VESI Overseas Guideline

VESI Re-Entry Guideline

VESI Qualification Evidence Guides

Appendix 1 – Skills and Training Matrix Role Descriptions

Roles of Worker		Description of Work
Asset Inspector		Engaged in asset inspection, pole testing and data capture
Auditor	**General**	Engaged in Quality (Asset) and Compliance (HS&E) Field Auditing
	Underground	Engaged in Quality (Asset) Auditing of Underground Infrastructure
Cable Jointer		Engaged in the laying & Jointing of LV &/or HV cables and carrying out Live LV cable jointing, dependant on the successful completion of the relevant training course
Civil Worker		A person with no electrical qualification undertaking civil work Can include but not limited to workers undertaking trenching, concreting etc.
Communication workers	**HV/LV Enclosures**	Engaged in the installation and/or maintenance of Fibre Optic Cable and/or Communication equipment and/or Supervisory Control and Data Acquisition (SCADA) equipment in an enclosure
	Pole work	Engaged in the installation and/or maintenance of Fibre Optic Cable and communication equipment in the Telecommunication corridor on pole infrastructure for the VESI Network Operator
	Tower work	Engaged in the installation and/or maintenance of Fibre Optic Cable and communication equipment on tower infrastructure for the VESI Network Operator
	Underground work	Engaged in the installation and or maintenance of Fibre Optic Cable in trenches and pits for the VESI Network Operator
Substation Electrician / Fitter	**Distribution Substations**	Electricians, Electrical Fitter / Mechanics working on ESI distribution network infrastructure
	Terminal & Zone Substations	Electricians, Electrical Fitter / Mechanics working on ESI network infrastructure, including work in zone substations and or terminal stations
Electrical inspectors		Engaged in compliance inspections of customers LV and/or HV installations
HV Switching Operator	**Distribution**	Describes a person whose duties are primarily switching HV/LV Distribution apparatus. The class of Authority is defined by the Network Operator
	Terminal & Zone Substations	Describes a person whose duties are primarily switching Zone Substations and/or Terminal Station apparatus. The class of Authority is defined by the Network Operator
Lineworker	**Distribution**	Lineworker engaged in working on distribution and sub transmission assets up to and including 66kV
	Transmission	Lineworker engaged in working on transmission assets above 66kV

Roles of Worker		Description of Work
Meter Technician		An electrical worker engaged in the installation, maintenance or testing of direct, C/T and/or HV metering installations for the purpose of point of supply revenue metering
No Go Zone Assessor		A person who is approved by the Network Operator to grant permission for third party personnel to work near overhead and Underground Network Assets
Plant operator	**ESI worker**	A person whose duties are primarily operating ESI mobile plant on or near ESI infrastructure e.g. Pole Erection Recovery Unit (PERU), excavator.
	Day hire	A person operating plant under direct supervision by a qualified worker for a specific task on a short term basis e.g. crane
Supervisor / Team Leader		Team Leader / Supervisor not actively engaged in field work
Technical Officer / Maintenance worker		A person who requires access to an electrical environment including entry to live HV/LV enclosures for the purposes of grounds maintenance or inspection Can include but not limited to Engineers, Draftsperson, Project managers/Planners, Surveyors, fire services technician, gardener, store person, driver, OHS Coordinator, trainer, manager etc.
Rigger	**Towers**	Engaged in general Rigging work on tower infrastructure
	General	Engaged in general Rigging work other than on towers
Tester	**Distribution Assets**	Includes field protection devices & / or cable testing
	Terminal & Zone Substations	Includes testing associated with Transmission & Distribution equipment & / or protection and control circuits
Trade Assistant		A person with no electrical qualification undertaking support work with qualified ESI workers. Restricted to ground support function only
Vegetation	**Assessor**	Engaged in assessing and scoping vegetation near live electrical apparatus. Determine cutting requirements to confirm compliance for vegetation near live electrical apparatus
	Cutter working from EWP	Engaged in vegetation control work for the Network Operator from an Elevated Work Platform (EWP)
	Ground Crew	Engaged in assisting a vegetation worker as ground support function only. Could include chipper operation and/or chainsaw if suitably trained
	Specialist Plant Operator	Engaged in vegetation control work for the Network Operator from the ground using specialised plant e.g. mechanical boom saw
	Tree Climber	Engaged in vegetation control work for the Network Operator from a tree

Appendix 2 – Training Modules / Competency Standard Unit

Attached Climbing for Tower Work

Module purpose	This module provides the learner with the knowledge and skills to climb towers using the attached climbing method This module can be used for both refresher training and initial training
For whom	All personnel required to climb towers
Frequency	Annual
Summary of content	• Visual inspection and attachment of equipment • Correctly ascending a tower • Correctly descends a tower
Learning outcomes	On successful completion of this module the learner should be able to:
Learning Outcome 1	Demonstrate correct visual inspection of equipment
Assessment Criteria	1.1 Perform visual inspection of harness, lanyards and clip 1.2 Perform clip check for correct operation
Learning Outcome 2	Demonstrate correct attached climbing techniques
Assessment Criteria	2.1 Demonstrate tower ascent with one lanyard always attached to an acceptable anchor point* 2.2 Demonstrate correct attachment of pole strap or both lanyards when in final work position 2.3 Demonstrate the skill required to move to different work locations on the tower whilst attached at all times 2.4 Demonstrate correct descent of the tower with one restraining lanyard attached to an acceptable anchor point at all times

Learning Outcome 3	Use of installed fall arrest systems
Assessment Criteria	3.1 Perform inspection of fixed fall arrest system
	3.2 Demonstrate the correct use of a fixed fall arrest system while ascending a tower
	3.3 Demonstrate the correct technique of transferring from a fixed fall arrest system to work position and back on to a fixed fall arrest system
	3.4 Demonstrate the correct us of a fixed fall arrest system to descend from a tower.
Learning Outcome 4	Use of fall arrest rope
Assessment Criteria	4.1 Perform inspection of fall arrest rope
	4.2 Demonstrate the correct use of a fall arrest rope while ascending a tower
	4.3 Demonstrate the correct technique of transferring from a fall arrest rope to work position and back on to a fixed fall arrest system
	4.4 Demonstrate the correct us of a fall arrest system to descend from a tower.

* Should include knowledge of normal approach and controlled approach for instructed and authorised personnel

Cable Pit / Trench / Excavation Rescue - UETDRRF07B

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial training

CPR – HLTAID001

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial training

EWP Controlled Descent Escape - UETTDRRF08B

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial training

EWP Rescue – UETTDRRF03B

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial training

First Aid in an ESI Environment - UETTDRRF10B

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial training

Module purpose	This module provides the learner with the knowledge and skills to safely assist a High Voltage (HV) Live Work crew in the installation, replacement, removal and maintenance of poles and associated electrical apparatus (e.g. HV switch replacement) up to 66kV
For whom	Pole Erection Recovery Unit Operator who has the appropriate plant licence and experience in the use of Pole Erection Recovery Units in the Electrical Supply Industry and who are not trained HV Live Lineworkers
Frequency	Yearly
Delivery	Shall be delivered by an RTO for initial, competency assessment and refresher training
Summary of content	• The Green Book • Australian Standards for HV Live Working • VESI Minimum Rules for Carrying out High Voltage Live Work in Victoria • Relevant Enterprise HV Live Work manual, policy, and procedures • Risk / Hazard assessment • Role and responsibility of the “Safety Observer” • General safety work practices • Minimum Approach Distances (MAD) • Step & Touch Potential • Suitable Structures for pole replacement work • Suitable Structures for electrical apparatus replacement work • Mobile Plant Earthing and Bonding • Setting up the Pole Erection Recovery Unit • Jib Positioning & Lifting Operation • Barriers and Cover up Equipment
Learning outcomes	On successful completion of the module the learner should be able to:
Learning outcome 1	Identify the relevant Australian Standards, VESI HV Live Work rules, safety instructions and general safe work practices and procedures for High Voltage Live Work techniques related to the installation, replacement, removal and maintenance of poles and associated electrical apparatus
Assessment criteria	1.1 Identify the clauses within The Green Book relating to HV Live Work

1.2 Identify the relevant information in the Australian Standards, VESI Minimum Rules for Carrying out High Voltage Live Work in Victoria and enterprise Live Work manuals and procedures

1.3 Define the Safe Work Method Statement (SWMS) and risk/job safety assessment process required prior to undertaking a HV Live Work task

Learning outcome 2 Plan and prepare to carry out, Live Work associated with the Installation, replacement, removal and maintenance of poles and associated electrical apparatus

Assessment criteria

2.1 Define the responsibilities of personnel associated with the HV Live Work

2.2 Identify the common risks and controls appropriate to the task

2.3 State the responsibilities of the “Safety Observer” within the HV Live Work task

2.4 Identify suitable structures associated with the HV Live Work

2.5 Identify the minimum approach distances observed by personnel plant and associated equipment when approaching exposed live HV conductors

2.6 Identify items of equipment used for HV live pole replacement work

2.7 Identify the general work practice and procedure including Barriers, cover up, plant earthing and bonding associated with HV live work

2.8 Identify the step and touch potential risks and controls

Learning outcome 3 Carry out the installation and/or replacement of a HV pole in conjunction with a HV Live Work crew under live or simulated live conditions

Assessment criteria

3.1 Identify and document the risks and controls appropriate to the task

3.2 Identify the equipment required to install and/or replace a live HV pole

3.3 Identify the method required to install and/or replace a live HV pole

3.4 Demonstrate the required set up of the PERU including earthing requirements and jib positioning

3.5 Perform appropriate work methods to replace/install a HV pole and associated hardware with conductors energised using correct HV Live Work methods

3.6 Demonstrate the required minimum approach distances and safety procedures

Module purpose	This module provides the learner with the knowledge and skills to safely assist a High Voltage (HV) Live Work crew in the Installation, replacement, removal and maintenance of electrical apparatus tasks (e.g. HV switches) in the vicinity of Live HV apparatus up to 66kV
For whom	Vehicle mounted crane operator who has the appropriate licence and experience in the use of Vehicle Mounted Cranes in the Electrical Supply Industry and who are not trained HV Live Lineworkers
Frequency	Yearly
Delivery	Shall be delivered by an RTO for initial, competency assessment and Refresher training
Summary of content	• The Green Book • Australian Standards for HV Live Working • VESI Minimum Rules for Carrying out High Voltage Live Work in Victoria • Relevant Enterprise HV Live Work manual, policy, and procedures • Risk / Hazard assessment • Role and responsibility of the “Safety Observer” • General safety work practices • Minimum Approach Distances (MAD) • Step & Touch Potential • Suitable Structures for electrical apparatus replacement work • Mobile Plant Earthing and Bonding • Setting up the vehicle mounted crane • Jib Positioning & Lifting Operation • Barriers and Cover up Equipment
Learning outcomes	On successful completion of the module the learner should be able to:
Learning outcome 1	Identify the relevant Australian Standards, VESI HV Live Work rules, safety instructions and general safe work practices and procedures for High Voltage Live Work techniques related to the Installation, replacement, removal and maintenance of electrical apparatus
Assessment criteria	1.1 Identify the clauses within The Green Book relating to HV Live Work 1.2 Identify the relevant information in the Australian Standards, VESI Minimum Rules for Carrying out High Voltage Live Work in Victoria and enterprise Live Work manuals and procedures

1.3 Define the Safe Work Method Statement and risk/job safety assessment process required prior to undertaking a HV Live Work task

Learning outcome 2

Plan and prepare to carry out the installation, replacement, removal and maintenance of electrical apparatus in the vicinity of Live HV apparatus

Assessment criteria

2.1 Define the responsibilities of personnel associated with the Installation, replacement and removal of electrical apparatus

2.2 Identify the common risks and controls appropriate to the task

2.3 State the responsibilities of the Safety Observer

2.4 Identify suitable structures for the installation, replacement and removal of electrical apparatus

2.5 Identify the minimum approach distances observed by personnel plant and associated equipment when approaching exposed live HV conductors

2.6 Identify items of equipment used for the Installation, replacement and removal of electrical apparatus

2.7 Identify the general work practice and procedure including Barriers, Cover up, plant earthing and bonding associated with HV Live work

2.8 Identify the step and touch potential risks and controls

Learning outcome 3

Carry out the Installation, replacement and removal of electrical apparatus in conjunction with a HV Live Work crew under live or simulated live conditions

Assessment criteria

3.1 Identify and document the risks and controls appropriate to the task

3.2 Identify the equipment required to install, replace and remove electrical apparatus

3.3 Identify the method required to install, replace and remove electrical apparatus

3.4 Demonstrate the required set up of the vehicle mounted crane including earthing requirements and jib positioning

3.5 Perform appropriate work methods to install, replace and remove electrical apparatus with conductors energised using correct Live Work methods

3.6 Demonstrate the required minimum approach distances and safety procedures

Limited High Voltage Live Work (Vegetation Control)

Module purpose	This module provides the learner with the knowledge and skills to safely perform High Voltage (HV) limited stick tasks up to and including 22KV for the purpose of vegetation control The course involves the limited use of HV live work equipment such as hand sticks, fitting of conductor covers and insulated control ropes to facilitate the moving of HV conductors away from vegetation but does not allow actual work to be performed on conductors or the un-securing of conductors from a structure
For whom	Qualified Line workers who are required to undertake vegetation work near Live HV overhead conductors and who are not already trained in HV Live Line work subject to prior Network Operator approval
Frequency	Yearly
Delivery	Shall be delivered by an RTO for initial, competency assessment and Refresher training. Refer to the VESI Minimum Rules for Carrying out HV Live Work for anticipated minimum time frames for annual competency assessments
Summary of content	• The Green Book • HV Live Working Australian Standards • VESI Minimum Rules for Carrying out High Voltage Live Work in Victoria • Relevant Enterprise HV Live Work manual, policy, and procedure • Risk / Hazard assessment • Role and responsibility of the “Safety Observer” • General safety work practices • Minimum Approach Distances • HV Live work tools and equipment
Learning outcomes	On successful completion of the module the learner should be able to:
Learning outcome 1	Identify the relevant Australian Standards, VESI HV Live Work rules and general safe work practices and procedures to undertake HV Live work techniques
Assessment criteria	1.1 Identify the clauses within The Green Book relating to Live line work 1.2 Identify the relevant HV Live Working Australian Standards

1.3 Identify the relevant information in the VESI Minimum Rules for Carrying out High Voltage Live Work in Victoria and enterprise HV live Work manuals and procedures

1.4 Define the Safe work Method statement and risk/job safety assessment process required prior to undertaking a HV Live work task

1.5 Identify the communication and application requirements with the control room to perform HV live work according to established enterprise procedures

1.6 Define the process for incident reporting according to established enterprise procedures

Learning outcome 2 Plan and prepare to carry out High Voltage Live Work for Vegetation Control

Assessment criteria

2.1 Define the responsibilities of personnel associated with the HV Live Work Vegetation control

2.2 Identify the minimum approach distances observed by personnel, plant and Live Line tools when approaching exposed live high voltage conductors

2.3 Identify the equipment required to perform limited HV live work including the clearing of vegetation in proximity to live HV conductors

2.4 Identify the methods required to perform the vegetation clearing tasks

2.5 Define the care, maintenance and testing requirements for Live Line equipment to be utilised

2.6 Identify the general work practice and procedure for plant earthing and bonding associated with HV live work

2.7 Identify the step and touch potential risks and controls

Learning outcome 3	Identify the requirements and responsibilities of a Safety Observer in relation to HV Live work
Assessment criteria	3.1 Identify the roles and responsibilities of a safety observer/s during a HV Live work task 3.2 Identify environmental influences that may contribute to distraction of a safety observer 3.3 Identify the ergonomic requirements in relation to the positioning of the safety observer to be and remain effective 3.4 Identify methods of communication between the safety observer and the HV Live work crew
Learning outcome 4	Carry out High Voltage Live Work for Vegetation Control tasks
Assessment criteria	4.1 Identify the equipment required to perform limited HV live work including the clearing of vegetation in proximity to live HV conductors 4.2 Identify the methods required to perform the vegetation clearing tasks 4.3 Identify and document the risks and controls appropriate to the task 4.4 Demonstrate the communication requirements to perform HV live work with the Control Centre 4.5 Demonstrate the required skills and knowledge to perform vegetation clearing tasks in a variety of situations in line with the VESI “Minimum Rules for carrying out High Voltage Live Work in Victoria” document including the: ~ Fitting of HV covers to conductors ~ Fitting of insulated control ropes to move/restrain conductors to provide clearance to vegetation ~ Use of insulated hand sticks to control conductors or vegetation 4.6 Perform and demonstrate competence in vegetation clearing tasks in various situations where the vegetation to be removed is: ~ below the conductors, ~ adjacent to the conductors ~ above the conductors 4.7 Demonstrate the required minimum approach distances and safety precautions

Live LV Panel Rescue - UETTDRRF06B

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial training

Maintain energised high voltage distribution overhead electrical apparatus (glove) – UETTDRDP14A

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial, competency assessment and Refresher training. Refer to the VESI Minimum Rules for Carrying out HV Live Work for anticipated minimum time frames for annual competency assessments

Maintain energised high voltage distribution overhead electrical apparatus (stick) – UETTDRDP13A

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial, competency assessment and Refresher training. Refer to the VESI Minimum Rules for Carrying out HV Live Work for anticipated minimum time frames for annual competency assessments

Maintain energised transmission lines using high voltage live work Barehand method - UETTDRTP32A

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial, competency assessment and Refresher training. Refer to the VESI Minimum Rules for Carrying out HV Live Work for anticipated minimum time frames for annual competency assessments

Maintain energised transmission lines using high voltage live work stick method - UETTDRTP31A

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	Shall be delivered by an RTO for initial, competency assessment and Refresher training. Refer to the VESI Minimum Rules for Carrying out HV Live Work for anticipated minimum time frames for annual competency assessments

Pole Top Rescue - UETTDRRF02B

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial training

Safe Approach Distances

Module purpose	This module provides the learner with the knowledge and skills to maintain safe approach distances (SAD) to Extra High Voltage (EHV), high voltage (HV) and low voltage (LV) electrical apparatus This module can be used for both initial and refresher training
For whom	All personnel when working, or operating Vehicles or Mobile Plant, on or near Electrical Apparatus
Frequency	Annual
Summary of content	• The Blue Book and The Green Book • SAD to EHV, HV and LV apparatus in regards to: ~ Personal clearances ~ Vehicles ~ Mobile plant ~ Elevating Work Platforms (EWP) • SAD Special
Learning outcomes	On successful completion of this module the learner should be able to:
Learning outcome 1	Identify the requirements for the Safe Approach to Electrical Apparatus within the Victorian Electrical Supply Industry
Assessment criteria	1.1 Identify and explain clauses within The Blue Book and/or The Green Book relating to the Safe Approach to Electrical Apparatus 1.2 Identify and explain clauses within The Blue Book and/or The Green Book relating to the application of Safe Approach Distance - Persons
Learning outcome 2	Identify the SAD for persons working on or near EHV, HV and LV electrical apparatus and the safe use of vehicles or mobile plant
Assessment criteria	2.1 Identify the SAD to EHV, HV and LV apparatus for persons 2.2 Identify the SAD to EHV, HV and LV apparatus for vehicles 2.3 Identify the SAD to EHV, HV and LV apparatus for mobile plant 2.4 Identify the SAD to EHV, HV and LV apparatus for EWP vehicles

Learning outcome 3*	Identify the requirements for SAD special
Assessment criteria	3.1 Identify the requirements for the use of Safe Approach Distance - Special
	3.2 Identify the SAD special to high voltage apparatus and who can apply SAD special
	3.3 Identify the control measures used when applying SAD special
	3.4 Identify the approved tasks authorised persons can apply SAD – Special

*Learning outcome 3 is only required for workers undertaking overhead work

Safe Approach Distance – Vegetation Work

Module purpose	This module provides the learner with the knowledge and skills to maintain Safe Approach Distances (SAD) and Vegetation clearances to High Voltage (HV) and Low Voltage (LV) electrical apparatus This module can be used for both initial and refresher training
For whom	All personnel when working, or operating Vehicles or Mobile Plant, near or in the vicinity of Electrical Apparatus
Frequency	Annual
Summary of content	• The Blue Book and The Green Book • VESI Vegetation Management Guideline • SAD to HV and LV apparatus in regards to: ~ Personal clearances ~ Vehicles ~ Mobile plant ~ Elevating Work Platforms (EWP) • Vegetation Clearances
Learning outcomes	On successful completion of this module the learner should be able to:
Learning outcome 1	Identify the requirements for the Safe Approach to Electrical Apparatus and Vegetation Clearances within the Victorian Electrical Supply Industry
Assessment criteria	1.1 Identify and explain clauses within The Green Book relating to the Safe Approach to Electrical Apparatus 1.2 Identify and explain clauses within The Green Book relating to the application of Safe Approach Distance - Persons applicable to vegetation works 1.3 Identify and explain clauses within The Green Book and the VESI Vegetation Management Guideline relating to the application of Safe Approach Distance and Vegetation Clearances for Vegetation Works

Learning outcome 2	Identify the SAD for Instructed and Authorised persons working near or in the vicinity of HV and LV electrical apparatus and the safe use of vehicles or mobile plant
Assessment criteria	2.1 Identify the SAD to HV and LV apparatus for persons undertaking Vegetation works utilising insulated EWP, tools, plant and equipment 2.2 Identify the SAD to HV and LV apparatus for persons undertaking Vegetation works when climbing or working from ground level 2.3 Identify the SAD to HV and LV apparatus for vehicles 2.4 Identify the SAD to HV and LV apparatus for mobile plant 2.5 Identify the SAD to HV and LV apparatus for EWPs
Learning outcome 3	Identify the Vegetation Clearances for Instructed and Authorised persons working near or in the vicinity of HV and LV electrical apparatus
Assessment criteria	3.1 Identify the Vegetation Clearances for persons utilising insulated EWP, tools plant and equipment 3.2 Identify the Vegetation Clearances for persons performing vegetation works when climbing or working from ground level

Testing of connections to low voltage electricity networks – UETTDRRF11A (Servicing Procedures)

This Competency Standard Unit is published at www.training.gov.au

When delivering the CSU the following VESI requirements including the learning outcomes and assessment criteria shall be undertaken.

Delivery

This Competency Standard Unit shall be delivered by an RTO for Initial training.

Refresher training may be completed by a Certificate IV Workplace Trainer and Assessor who is able to demonstrate vocational competence and experience in this subject matter.

The VESI STRC has reviewed the requirements of Australian Standard AS4741-2010 Testing of connections to low voltage electricity networks clause 1.6 and advise the following:

Training in this subject matter has been undertaken since 1999 in the VESI and an established training methodology in using non-RTO's to deliver this training has achieved an equal outcome to using RTO's. In the VESI we will continue the current practice of utilising both RTO's and non RTO's. This deviation from the Australian Standard will be monitored by the VESI STRC.

When delivering the VESI training/assessment requirements the Mandatory (M) practical assessment tasks from the VESI Installation Supply and Connection Testing Procedures in table 1 shall be completed for the nominated role.

Where the individual Connection Procedure is Inclusive (I) for a particular role, the testing steps and principals are replicated in the Mandatory practical assessment task and are not required to be independently assessed.

Additional (A) Connection Procedures that are undertaken by the participant during their work activities are required to be assessed as competent during the annual refresher.

Table 1

Section	Connection Procedures	Line worker	Cable Jointer	Electrical Inspector	Metering Technician
4.4	(N) Overhead Supply - *Up to 100 Amp*	I			
4.5	(N) Underground Supply - *Supplied from a Pit*	M	M		
4.6	(N) Underground Supply - *Single Occupancy - greater than 100 amps from a Supply Facility*		A	M	
4.7	(N) Unmetered Supply - *Not associated with Multiple Occupancies*	A		I	
4.8	(N) Multiple Occupancy	A		I	
4.9	(N) Public Lighting - *Column or Scheme*	I	M		
4.10	(N) Public Lighting - *Frangible Column*	I	I		
4.11	(E) Replacement or Disconnection, Reconnection Overhead Service - *Service Cable on Supply*	M			
4.12	(E) Replacement Overhead Service - *Service Disconnected from Supply*	I			
4.13	(E) Replacement Overhead Service - *Installation disconnected from Supply; Pole end protection device*	I		I	
4.14	(E) Single Occupancy: Meter Alteration and/or Addition - *Direct Metering*	M			M
4.14A	(E) Multiple Occupancy: Meter Alteration and/or Addition - *Direct Metering Main or Occupancy Neutral NOT Disturbed*	I		I	I
4.14B	(E) Multiple Occupancy: Meter Alteration and/or Addition - *Direct Metering Main or Occupancy Neutral Disturbed*	A		A	M
4.15	(E) Metering Alteration/Addition – *Current Transformer (CT) installation*			A	M
4.16	(E) Abolishment of Electricity Supply	I	A		I
4.17	(E) Network “High Voltage” Injection Procedure			M	
4.18	(E) UG Mains Cable Fault - *Reconnection of Supply*	I	I	I	

Legend

(N) New Installations
(E) Existing Installations
M Mandatory
A Additional
I Inclusive

Testing of connections to low voltage electricity networks – UETTDRRF11A (Servicing Procedures)

Module purpose	This module provides the learner with the knowledge and skills to carry out servicing and connection testing procedures for new or existing customer installation
For whom	All personnel required to carry out servicing and Connection testing procedures
Frequency	Annual
Summary of content	• Servicing Safety Processes ~ Personal protective equipment ~ Risk Assessment ~ Hazards • Servicing Testing Processes ~ Testing for De-energised ~ Establishing the Neutral Integrity Test Point ~ Continuity Test ~ Identifying and marking neutrals ~ To identify conductors when ID unknown ~ Polarity Testing ~ VESI Neutral and Supply Tester (NST) Procedure ~ How the NST works ~ Installation Supply Connection Tests and Procedures ~ New connections ~ Service replacement – damaged and or upgrade ~ Disconnection of supply – URD or overhead e.g. Pole replacement ~ Neutral Impedance Test Failure ~ Check Test ~ Phase Sequence Testing ~ Load Testing • Service height requirements according to asset regulations and company policy • LV Customer Installations Safety Regulations and Procedures ~ Customer notifications and standard forms ~ Certificate of Electrical Safety ~ Notice of Installation Defect ~ Statement of Isolation of Customers Low Voltage Supply (SILV)

Testing of connections to low voltage electricity networks – UETTDRRF11A (Servicing Procedures)

Learning outcomes

On successful completion of this module the learner should be able to:

Learning outcome 1

Demonstrate Servicing Safety Processes

Assessment criteria

1.1 Identify and correctly use personal protective equipment (PPE) and safety equipment when performing installation servicing work

1.2 Carry out a risk assessment to identify the hazards pertaining to an installation servicing task

1.3 Identify the hazards associated with working in pits

1.4 Demonstrate the ability to identify and mark neutrals

1.5 Demonstrate the ability to identify conductors when ID unknown

Learning outcome 2

Demonstrate the ability to apply testing associated with connection procedures.
Note: These tests are to be performed in a range of VESI connections and should be relevant to the work being performed, e.g. OH Service, UG Service and Metering

Assessment criteria

2.1 Perform Installation Supply Connection tests to installation

- ~ Demonstrate – Test for De-energised
- ~ Demonstrate – Continuity Test
- ~ Demonstrate – Polarity Testing
- ~ Demonstrate – Check Testing
- ~ Demonstrate – Phase Sequence Testing
- ~ Demonstrate – Insulation resistance test
- ~ Demonstrate – Load Testing

Learning outcome 3

Demonstrate the NST Procedure
Note: These tests are to be performed in a range of VESI connections and should be relevant to the work being performed, e.g. OH Service, UG Service and Metering

Assessment criteria

3.1 Demonstrate a knowledge of the VESI “Installation Supply Connection Tests and Procedures”

3.2 Describe the purpose of the NST tester

3.3 Identify the Neutral Integrity Test Point

3.4 Perform an NST on a service installation

3.5 Identify a fault using the NST tester

	3.6 Describe the variants that could lead to an incorrect result on a test
	3.7 Describe the procedure for disconnection and reconnection of a service cable
	3.8 Describe the correct reporting procedure when an installation fails the Neutral Impedance Test
Learning outcome 4	Demonstrate an understanding of appropriate forms and documents relating to LV installations
Assessment criteria	4.1 Demonstrate an understanding of the correct process regarding the Certificate of Electrical Safety (Prescribed and Non-prescribed)
	4.2 Demonstrate an understanding and the correct use of a Notice of Installation Defect
Learning outcome 5	Describe service height requirements to Network Operator requirements
Assessment criteria	5.1 Describe service height requirements according to Network Operator requirements

Switchyard structures at Heights Rescue - UETTDRRF05B

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial training

Tower Rescue - UETTDRRF04B

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial training

Undertake release and rescue from a tree near live electrical apparatus - UETTDRVC34A

This Competency Standard Unit is published at www.training.gov.au

Frequency	Annual
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial, competency assessment and Refresher training

Apply Access procedures to work on or near electrical network infrastructure - UETTDRRF09B (Receive Access Permits)

This Competency Standard Unit is published at www.training.gov.au.

When delivering the CSU the following VESI requirements including the learning outcomes and assessment criteria shall be undertaken.

Delivery	This Competency Standard Unit shall be delivered by an RTO for initial training
Frequency	Three yearly
Learning outcome 1	Identify the requirements for the use of the EAP within the Victorian Electrical Supply Industry
Assessment criteria	1.1 Identify and explain clauses within The Blue Book and The Green Book relating to the access of HV and LV electrical apparatus 1.2 Identify and explain clauses within The Blue Book and The Green Book relating to the general Safety requirements 1.3 Identify and explain clauses within The Blue Book and The Green Book relating to the work in the vicinity of electrical apparatus 1.4 Identify and explain the clauses within The Blue Book and The Green Book relating to the approach to electrical apparatus 1.5 Identify and explain clauses within The Blue Book and The Green Book relating to the earthing of High Voltage electrical apparatus 1.6 Identify and explain clauses within The Blue Book and The Green Book relating to Access to work on or Near High Voltage Electrical Apparatus 1.7 Identify and explain clauses within The Blue Book and The Green Book relating to the coordination of Low Voltage and High Voltage Access Switching 1.8 Identify and explain the requirement and reasons for and use of the Electrical Access Permit 1.9 Identify and explain the reasons for the Electrical Access Authorisation process

Learning outcome 2	Demonstrate an understanding of the Electrical Access Permit and its application
Assessment criteria	2.1
	2.2 Identify the general nature of all types of electrical apparatus within the scope of the Electrical Access Permit
	2.3 Describe the circumstances under which electrical apparatus may be approached and describe the precautions to be taken
	2.4 Describe the various methods of isolating HV and LV apparatus in general use and associated processes for locking and tagging
	2.5 Describe the significance of the various types of signs and barriers in use
	2.6 Describe the purpose and application of operational and work party earths in general use
	2.7 Describe the methods that apparatus can inadvertently become or remain alive
	2.8 Describe the EAP issuing and cancellation process
	2.9 Describe the process to change the Electrical Access permit conditions (e.g. signing on an additional recipient)
	2.10 Explain the importance of keeping the EAP available for reference at the worksite and of signing off the Permit before leaving the worksite
	2.11 Describe the communication process for an emergency on site
Learning outcome 3	Demonstrate knowledge of the various VESI forms and their relationship to an Electrical Access Permit
Assessment criteria	3.1 Describe the EAP form and identify the sections and their information requirements
	3.2 Describe application of a LV Access Authority
	3.3 Describe application of an Electrical Apparatus Clearance for Service
	3.4 Describe the application of a Vicinity Authority
	3.5 Describe the application of a Permit to Work / SILV
	3.6 Describe the application of a Sanction for Tests

Learning outcome 4	Identify the responsibilities of the various persons associated with the Access Permit process
Assessment criteria	4.1 Describe the responsibilities of the Authorised Recipient of an Electrical Access Permit
	4.2 Describe the responsibilities of the Recipient in Charge of an Electrical Access Permit
	4.3 Describe the responsibilities of the Operator issuing an Electrical Access Permit
	4.4 Describe the circumstances under which Non-Authorised Persons may sign onto an Electrical Access Permit and the process for ensuring their safety
	4.5 The Responsibilities of the Safety Observer in relation to the Access Permit requirements
Learning outcome 5	Demonstrate an understanding of the Earthing process
Assessment criteria	5.1 State the related safe working practices and the procedures to attach an earthing device
	5.2 Identify when and where additional earths and/or Bonders are required
	5.3 Describe the Priority Earthing System
	5.4 Demonstrate the correct application of an earthing device to an isolated HV circuit. (Note: Learning Assessment Criteria 5.4 applies to persons with a need to apply earths)
Learning outcome 6	Describe knowledge of the business' organisational procedures relating to entry to enclosure requirements, site security, communications protocols for entry and exit and in an emergency situation
Assessment criteria	6.1 Describe knowledge of the business' organisational procedures relating to site security, emergency contacts and operational contacts
	6.2 Identify safe work practices, general precautions and hazards that need to be observed when entering a HV enclosure

Confined Spaces

Training shall be based on the work being undertaken and the performance criteria outlined in the relevant Competency Standard Unit which meets the requirements of the Occupational health and Safety Regulations 2007 - Part 3.4 Confined Spaces

Consideration shall be given to the following requirements; entry to a confined space, the use of a work permit system, breathing apparatus and confined space rescue when selecting the relevant Competency Standard unit

Frequency	Three yearly or as required by the CSU
Delivery	Shall be delivered by an RTO for initial, competency assessment and Refresher training

Enter Enclosures

Module purpose	This module provides the learner with the knowledge and skills to understand the procedures to be observed when entering enclosures containing Extra High Voltage (EHV), High Voltage (HV) and Low Voltage (LV) apparatus This module can be used for both initial and refresher training
For whom	All personnel not otherwise authorised who are required to enter enclosures containing EHV/HV/LV apparatus
Frequency	Three yearly
Summary of content	• Overview of the Electrical Distribution and Transmission System • Identification of EHV, HV & LV Apparatus • The Blue Book and The Green Book • Safe Approach Distances to EHV, HV and LV apparatus in regards to: ~ Personal clearances ~ Vehicles ~ Mobile plant ~ Elevating Work Platforms (EWP) • Procedures to be observed when entering LV, HV and EHV enclosures • Evacuation and emergencies • Underground Substation Procedure • Personal protective equipment (PPE) • Site visit may include distribution or zone sub-stations or terminal stations
Learning outcomes	On successful completion of this module the learner should be able to:
Learning outcome 1	Identify the requirements of the electrical distribution and transmission system and features of simple electrical circuitry
Assessment criteria	1.1 Describe the key features of electricity i.e. voltage, current 1.2 Describe the effect that electricity has on the human body 1.3 Identify the main features of an electrical supply system, from power station to the customer

Enter Enclosures

Learning outcome 2	Identify the requirements for entry into enclosures within the Victorian Electrical Supply Industry
Assessment criteria	2.1 Identify and explain clauses within The Blue Book and The Green Book relating to the general safety requirements 2.2 Identify and explain clauses within The Blue Book and The Green Book relating to the work in the vicinity of electrical apparatus 2.3 Identify and explain clauses within The Blue Book and The Green Book relating to the safe approach to electrical apparatus 2.3 Identify LV, HV and EHV apparatus within an enclosure
Learning outcome 3	Identify the Green Book safe approach distances (SAD) for persons entering enclosures containing LV, HV and EHV apparatus
Assessment criteria	3.1 Identify SAD to LV, HV and EHV electrical apparatus for personnel authorised to enter enclosures (Section 2.3.4) 3.2 Identify SAD to EHV and HV apparatus for vehicles and mobile plant
Learning outcome 4	Identify safe work practices, general precautions and hazards that need to be observed whilst within an LV, HV and EHV environment
Assessment criteria	4.1 Identify and locate the correct enclosure 4.2 Identify and correctly use personal protective equipment (PPE) and safety equipment for personnel entering LV, HV and EHV enclosures 4.3 Demonstrate knowledge of potential hazards that may exist in enclosures containing LV, HV and EHV apparatus 4.4 Identify HV enclosures within a station that require more than just an Authorisation to enter HV enclosures 4.5 Demonstrate knowledge of the business' organisational procedures relating to site security, communication protocols for entry and exit during normal work activities and in an emergency

High Voltage (HV) Switching – RSO (Restricted Switching Overhead)

Module purpose	This module provides the learner with the knowledge and skills to perform High Voltage Electrical Switching on; all distribution overhead and ground type substations, spur and SWER lines and associated apparatus. Excluding metal enclosed switch gear
For whom	All personnel required to perform switching on the high voltage Distribution overhead apparatus, excluding the interconnected Network
Prerequisite	Perform High Voltage field switching operation to a given schedule - UETTDRIS44A. Perform low voltage switching operation to a given schedule – UETTDRIS43A. These Competency Standard Units shall be delivered by an RTO
Summary of content	• The Green Book • Roles and responsibilities • Network Operational procedures • Safe Work Method Statements (SWMS) and site risk assessment process • Operation of HV and LV electrical apparatus • Interpretation of HV single line diagrams • Systematic approach to switching • Hazard identification and Operator protection • Use of personal protective equipment (PPE) and safety equipment • Use of Operating Instructions • Communications protocols • Earthing Procedures • Issue / cancellation of Electrical Access Authority/s for personnel working on or in the vicinity of HV apparatus • Ferro Resonance • Restoration of supply • Fault finding and emergency response • Understanding of Protection Schemes

Assessment	The practical assessment should remain flexible to allow where possible, the utilisation of scheduled work for assessment
Frequency	Three yearly
Learning outcomes	On successful completion of this module the learner should be able to:
Learning Outcome 1	Locate, interpret, and apply appropriate Regulations, The Green Book and Network Operator Switching procedures relating to HV electrical safety
Assessment Criteria	1.1 Demonstrate a general knowledge of the structure of industry standards in relation to electrical safety 1.2 Demonstrate an ability to reference The Green Book 1.3 Demonstrate an ability to reference Network Operator Switching Procedures 1.4 Describe the function, roles and responsibilities of a Distribution Switching Overhead Operator 1.5 Identify Safe Work Method Statements (SWMS) and site risk assessment process for HV Switching 1.6 Identify and correctly use personal protective equipment (PPE) and safety equipment required for the safe operation of high voltage switchgear 1.7 Identify communications process with the Control Centre, work parties and other operators 1.8 Identify communications process for incident reporting in regards to switching operations

Learning Outcome 2	Demonstrate a working knowledge of the function, operation, and precautions associated with high voltage electrical apparatus and associated hardware
Assessment Criteria	2.1 Identify the capabilities of the typical range of switchgear installed on the overhead distribution network 2.2 Identify the use of caution and danger tags 2.3 Identify the precautions necessary in relation to Ferro resonance 2.4 Describe the method of operation of typical high voltage switchgear installed on the distribution network 2.5 Demonstrate an understanding of Network Operator nomenclature standards and switch numbering 2.6 Identify the procedure for commissioning new apparatus including new transformers, pre-commissioning tests, insulation tests, no-load voltage tests, phase sequence tests and phase-out tests 2.7 Identify the procedure for commissioning new apparatus e.g. new transformers pre-commissioning tests, insulation tests, no-load voltage tests, phase sequence tests and phase-out tests 2.8 Demonstrate an understanding of the operation and precautions associated with SWER systems
Learning Outcome 3	Interpret HV single line diagrams
Assessment Criteria	3.1 Identify the meaning of various symbols used in single line diagrams 3.2 Demonstrate an ability to read a single line diagram, check that it is correct with the network system

Learning Outcome 4	Demonstrate switching processes, procedures and communication protocol for the safe switching of the distribution overhead network
Assessment Criteria	4.1 Demonstrate accurate and effective communications with the Control Centre 4.2 Demonstrate the use of a switching instruction while performing switching operations 4.3 Demonstrate the application of the "Systematic Approach to Switching" 4.4 Demonstrate the operation of a range of high voltage switchgear installed on the distribution network
Learning Outcome 5	Demonstrate effective earthing practices and procedures when earthing HV electrical apparatus for access
Assessment Criteria	5.1 Identify the requirements for isolation from primary and secondary voltages necessary for safe access under access authority conditions 5.2 Identify the dangers of the application of earth devices to high voltage apparatus 5.3 Identify and correctly use personal protective equipment (PPE) and safety equipment required for the safe application of high voltage earthing devices 5.4 Demonstrate the application of a "Systematic Approach to Earthing" 5.5 Demonstrate an understanding of the priority earthing system

Learning Outcome 6	Describe the purpose, preparation and procedure for use of operational forms, access authorities and permits associated with HV switching
Assessment Criteria	6.1 Identify the options available for managing work in the vicinity of high voltage apparatus 6.2 Describe the need for maintaining security of high voltage installations, and for controlling the activity of people in these areas 6.3 Demonstrate knowledge of the access permit procedure, the responsibilities of people involved and its application in the workplace 6.4 Identify the requirements of additional access authorities associated with access to high voltage apparatus e.g. SILV, SCAP, PTW
Learning Outcome 7	Issue and cancel access authorities appropriate to the nominated tasks
Assessment Criteria	7.1 Demonstrate knowledge of procedures for the completion, issue and cancellation of an Electrical Access Authority 7.2 Prepare an Electrical Access Authority in accordance with accepted procedures and practices, which clearly defines safety precautions relating to access to high voltage apparatus 7.3 Conduct preliminary discussions with work party ensuring that the task can commence safely and issue an Electrical Access Authority for a specified task 7.4 Confirm work is completed and cancel Electrical Access Authority in accordance with procedures

Learning Outcome 8	Demonstrate and understanding of the functions and operation of common high voltage protection systems and suppression functionality
Assessment Criteria	8.1 Demonstrate an understanding of the functions and operation of over current and earth leakage protection 8.2 Identify suppression requirements when undertaking network switching
Learning Outcome 9	Demonstrate an understanding of patrolling and switching the HV network in fault situations
Assessment Criteria	9.1 Describe how to effectively patrol a faulted section of line to identify the probable cause 9.2 Explain how to efficiently isolate the faulted apparatus and restore supply under direction of the Control Centre 9.3 Describe the actions needed to liaise with other emergency services to make a faulted area safe 9.4 Demonstrate the actions necessary to coordinate on site repairs with work parties

High Voltage (HV) Switching – DSO (Distribution Switching Overhead)

Module purpose	This module provides the learner with the knowledge and skills to perform High Voltage Electrical Switching on; all distribution overhead field apparatus. Excluding metal enclosed switchgear
Prerequisite	Perform High Voltage field switching operation to a given schedule - UETTDRIS44A. Perform low voltage switching operation to a given schedule – UETDRIS43A. These Competency Standard Units shall be delivered by an RTO
For whom	All personnel required to perform switching on the high voltage Distribution Overhead Network
Summary of content	• The Green Book • Roles and responsibilities • Network Operational procedures • Safe Work Method Statements (SWMS) and site risk assessment process • Operation of HV and LV electrical apparatus • Interpretation of HV single line diagrams • Systematic approach to switching operations • Hazard identification and Operator protection • Use of personal protective equipment (PPE) and safety equipment • Use of Operating Instructions • Communications protocols • Earthing Procedures • Issue / cancellation of Electrical Access Authority/s for personnel working on or in the vicinity of HV apparatus • Ferro Resonance • Restoration of supply • Fault finding and emergency response • Understanding of Protection Schemes

Assessment	The practical assessment should remain flexible to allow where possible, the utilisation of scheduled work for assessment
Frequency	3 Yearly
Learning outcomes	On successful completion of this module the learner should be able to:
Learning Outcome 1	Locate, interpret, and apply appropriate Regulations, The Green Book and Network Operator Switching procedures relating to HV electrical safety
Assessment Criteria	1.1 Demonstrate a general knowledge of the structure of industry standards in relation to electrical safety 1.2 Demonstrate an ability to reference The Green Book 1.3 Demonstrate ability to reference and Network Operator Switching Procedures 1.4 Describe the function, roles and responsibilities of a Distribution Switching Overhead Operator 1.5 Identify Safe Work Method Statements (SWMS) and site risk assessment process for HV switching 1.6 Identify the personal protective equipment (PPE) and safety equipment required for the safe operation of high voltage switchgear 1.7 Identify communications process with the Control Centre, work parties and other operators 1.8 Identify communications process for incident reporting in regards to switching operations

Learning Outcome 2	Demonstrate a working knowledge of the function, operation, and precautions associated with high voltage electrical apparatus and associated hardware
Assessment Criteria	2.1 Identify the capabilities of the typical range of switchgear installed on the overhead distribution network 2.2 Identify the use of caution and danger tags 2.3 Identify the precautions necessary in relation to Ferro resonance 2.4 Describe the method of operation, and demonstrate the operation of typical high voltage switchgear and apparatus installed on the overhead distribution network 2.5 Demonstrate an understanding of Network Operator nomenclature standards and switch numbering 2.6 Identify the procedure for commissioning new apparatus including new transformers, pre-commissioning tests, insulation tests, no-load voltage tests, phase sequence tests and phase-out tests 2.7 Identify the procedure for commissioning new apparatus e.g. new transformers pre-commissioning tests, insulation tests, no-load voltage tests, phase sequence tests and phase-out tests 2.8 Demonstrate an understanding of the operation and precautions associated with distribution overhead electrical systems
Learning Outcome 3	Interpret HV single line diagrams and prepare a switching program
Assessment Criteria	3.1 Identify the meaning of various symbols used in single line diagrams 3.2 Demonstrate an ability to read a single line diagram, check that it is correct with the network system

Learning Outcome 4	Demonstrate switching processes, procedures and communication protocol for the safe switching of the distribution overhead network
Assessment Criteria	4.1 Demonstrate accurate and effective communications with the Control Centre 4.2 Demonstrate the use of a switching instruction while performing switching operations 4.3 Demonstrate the application of the “Systematic Approach to Switching” 4.4 Demonstrate the operation of a range of high voltage switchgear installed on the distribution network
Learning Outcome 5	Demonstrate effective earthing practices and procedures when earthing HV electrical apparatus for access
Assessment Criteria	5.1 Identify the requirements for isolation from primary and secondary voltages necessary for safe access under access authority conditions 5.2 Identify the dangers of the application of earth devices to high voltage apparatus 5.3 Identify and correctly use personal protective equipment (PPE) and safety equipment required for the safe application of high voltage earthing devices and demonstrate the correct use 5.4 Demonstrate the application of a “Systematic Approach to Earthing” 5.5 Demonstrate an understanding of the priority earthing system
Learning Outcome 6	Describe the purpose, preparation and procedure for use of operational forms, access authorities and permits associated with HV switching
Assessment Criteria	6.1 Identify the options available for managing work in the vicinity of high voltage apparatus 6.2 Describe the need for maintaining security of high voltage installations, and for controlling the activity of people in these areas 6.3 Demonstrate knowledge of the access permit procedure, the responsibilities of people involved and its application in the workplace 6.4 Identify the requirements of additional access authorities associated with access to high voltage apparatus

Learning Outcome 7	Issue and cancel access authorities appropriate to the nominated tasks
Assessment Criteria	7.1 Demonstrate knowledge of procedures for the completion, issue and cancellation of an Electrical Access Authority 7.2 Prepare an Electrical Access Authority in accordance with accepted procedures and practices, which clearly defines safety precautions relating to access to high voltage apparatus 7.3 Conduct preliminary discussions with work party ensuring that the task can commence safely and issue an Electrical Access Authority for a specified task 7.4 Confirm work is completed and cancel Electrical Access Authority in accordance with procedures
Learning Outcome 8	Demonstrate an understanding of the functions and operation of common high voltage protection systems and suppression functionality
Assessment Criteria	8.1 Demonstrate an understanding of the functions and operation of overcorrect and earth leakage protection 8.2 Identify suppression requirements when undertaking network switching
Learning Outcome 9	Demonstrate an understanding of patrolling and switching the HV network in fault situations
Assessment Criteria	9.1 Describe how to effectively patrol a faulted section of line to identify the probable cause 9.2 Explain how to efficiently isolate the faulted apparatus and restore supply under direction of the Control Centre 9.3 Describe the actions needed to liaise with other emergency services to make a faulted area safe 9.4 Demonstrate the actions necessary to coordinate on site repairs with work parties

High Voltage (HV) Switching – DS (Distribution Switching)

Module purpose	This module provides the learner with the knowledge and skills to perform High Voltage Electrical Switching on; all distribution field apparatus including metal enclosed switchgear and the underground network
Prerequisite	Perform High Voltage field switching operation to a given schedule - UETTDRIS44A. Perform low voltage switching operation to a given schedule – UETDRIS43A. These Competency Standard Units shall be delivered by an RTO
For whom	All personnel required to perform switching on the high voltage Distribution Network
Summary of content	• The Green Book • Roles and responsibilities • Network Operators Operational procedures • Safe Work Method Statements (SWMS) and site risk assessment process • Operation of HV and LV electrical apparatus • Interpretation of HV single line diagrams • Systematic approach to switching operations • Hazard identification and Operator protection • Personal protective equipment (PPE) and safety equipment • Use of Operating Instructions • Communications protocols • Earthing Procedures • Issue / cancellation of Electrical Access Authority/s for personnel working on or in the vicinity of HV apparatus • Ferro Resonance • Restoration of supply • Fault finding and emergency response • Understanding of Protection schemes
Assessment	The practical assessment should remain flexible to allow where possible, the utilisation of scheduled work for assessment
Frequency	3 Yearly

Learning outcomes	On successful completion of this module the learner should be able to:
Learning Outcome 1	Locate, interpret, and apply appropriate VESI Regulations, The Green Book and Network Operators Switching procedures relating to HV electrical safety
Assessment Criteria	1.1 Demonstrate a general knowledge of the structure of industry standards in relation to electrical safety 1.2 Demonstrate an ability to reference The Green Book 1.3 Demonstrate an ability to reference Network Operator Switching Procedures 1.4 Describe the function, roles and responsibilities of a Distribution Switching Overhead and Underground Operator 1.5 Identify Safe Work Method Statements (SWMS) and site risk assessment process for HV Switching 1.6 Identify the personal protective equipment (PPE) and safety equipment required for the safe operation of high voltage switchgear 1.7 Identify communications process with the Control Centre, work parties and other operators 1.8 Identify communications process for incident reporting in regards to switching operations
Learning Outcome 2	Demonstrate a working knowledge of the function, operation, and precautions associated with high voltage electrical apparatus and associated hardware
Assessment Criteria	2.1 Identify the capabilities of the typical range of switchgear installed on the overhead and underground distribution network 2.2 Identify the use of caution and danger tags 2.3 Identify the precautions necessary in relation to Ferro resonance 2.4 Describe the method of operation, and demonstrate the operation of typical high voltage switchgear installed on the overhead and underground distribution network 2.5 Demonstrate an understanding for the operation of transformers and the reasons for this method including the changing of taps

	2.6 Identify the procedure for commissioning new apparatus e.g. new transformers pre-commissioning tests, insulation tests, no-load voltage tests, phase sequence tests and phase-out tests
	2.7 Demonstrate an understanding of the operation and precautions associated with distribution overhead and underground electrical systems
Learning Outcome 3	Interpret HV single line diagrams and prepare a switching program
Assessment Criteria	3.1 Identify the meaning of various symbols used in single line diagrams
	3.2 Demonstrate an ability to read a single line diagram, check that it is correct with the network system
Learning Outcome 4	Demonstrate switching processes, procedures and communication protocol for the safe switching of the distribution overhead and underground network
Assessment Criteria	4.1 Demonstrate accurate and effective communications with the Control Centre
	4.2 Demonstrate the use of a switching instruction while performing switching operations
	4.3 Demonstrate the application of the “Systematic Approach to Switching”
	4.4 Demonstrate the operation of a range of high voltage switchgear installed on the distribution overhead and underground network
Learning Outcome 5	Demonstrate effective earthing practices and procedures when earthing HV electrical apparatus for access
Assessment Criteria	5.1 Identify the requirements for isolation from primary and secondary voltages necessary for safe access under access authority conditions
	5.2 Identify the dangers of the application of earth devices to high voltage apparatus
	5.3 Identify and correctly use personal protective equipment (PPE) and safety equipment required for the safe application of high voltage earthing devices
	5.4 Demonstrate the application of a “Systematic Approach to Earthing”
	5.5 Demonstrate an understanding of the priority earthing system

Learning Outcome 6	Describe the purpose, preparation and procedure for use of operational forms, access authorities and permits associated with HV switching
Assessment Criteria	6.1 Identify the options available for managing work in the vicinity of high voltage apparatus 6.2 Describe the need for maintaining security of high voltage installations, and for controlling the activity of people in these areas 6.3 Demonstrate knowledge of the access permit procedure, the responsibilities of people involved and its application in the workplace 6.4 Identify the requirements of additional access authorities associated with access to high voltage apparatus
Learning Outcome 7	Issue and cancel access authorities appropriate to the nominated tasks
Assessment Criteria	7.1 Demonstrate knowledge of procedures for the completion, issue and cancellation of an Electrical Access Authority 7.2 Prepare an Electrical Access Authority in accordance with accepted procedures and practices, which clearly defines safety precautions relating to access to high voltage apparatus 7.3 Conduct preliminary discussions with work party ensuring that the task can commence safely and issue an Electrical Access Authority for a specified task 7.4 Confirm work is completed and cancel Electrical Access Authority in accordance with procedures
Learning Outcome 8	Demonstrate an understanding of the functions and operation of common high voltage protection systems and suppression functionality
Assessment Criteria	8.1 Demonstrate an understanding of the functions and operation of overcurrent and earth leakage protection 8.2 Identify suppression requirements when undertaking network switching

Learning Outcome 9	Demonstrate an understanding of patrolling and switching the HV network in fault situations
Assessment Criteria	9.1 Describe how to effectively patrol a faulted section of line to identify the probable cause 9.2 Explain how to efficiently isolate the faulted apparatus and restore supply under direction of the Control Centre 9.3 Describe the actions needed to liaise with other emergency services to make a faulted area safe 9.4 Demonstrate the actions necessary to coordinate on site repairs with work parties

High Voltage (HV) Switching – ZSS (Zone Substation Switching)

Module purpose	This module provides the learner with the knowledge and skills to perform High Voltage Electrical Switching on; all Sub-Transmission and Distribution apparatus within zone substations
Prerequisite	Perform substation switching operation to a given schedule – UETTDRSB39A. This Competency Standard Units shall be delivered by an RTO
For whom	All personnel required to perform switching on the high voltage Sub Transmission and Distribution Network in Zone Substations
Summary of content	• The Green Book • Roles and responsibilities • Network Operators Operational procedures • Safe Work Method Statements (SWMS) and site risk assessment process • Operation of HV and LV electrical apparatus • Interpretation of HV single line diagrams • Systematic approach to switching operations • Hazard identification and Operator protection • Personal protective equipment (PPE) and safety equipment • Use of Operating Instructions • Communications protocols • Earthing Procedures • Issue / cancellation of Electrical Access Authority/s for personnel working on or in the vicinity of HV apparatus • Restoration of supply • Fault finding and emergency response • Understanding of Protection schemes
Assessment	The practical assessment should remain flexible to allow where possible, the utilisation of scheduled work for assessment
Frequency	3 Yearly
Learning outcomes	On successful completion of this module the learner should be able to:

Learning Outcome 1	Locate, interpret, and apply appropriate Regulations, The Green Book and Network Operators switching procedures relating to HV electrical safety
Assessment Criteria	1.1 Demonstrate a general knowledge of the structure of industry standards in relation to electrical safety 1.2 Demonstrate an ability to reference The Green Book & Network Operators Switching Procedures 1.3 Demonstrate an ability to reference Network Operator Switching Procedures 1.4 Describe the function, roles and responsibilities of a Zone Substation Switching Operator 1.5 Identify Safe Work Method Statements (SWMS) and site risk assessment process for HV switching 1.6 Identify the personal protective equipment (PPE) and safety equipment required for the safe operation of HV switchgear 1.7 Identify communications process with the Control Centre, work parties and other operators 1.8 Identify communications process for incident reporting in regards to switching operations
Learning Outcome 2	Demonstrate a working knowledge of the function, operation, and precautions associated with high voltage electrical apparatus and associated hardware
Assessment Criteria	2.1 Identify the capabilities of the typical range of switchgear installed in a Zone Substation 2.2 Identify the use of caution and danger tags 2.3 Describe the method of operation of typical high voltage switchgear and plant installed in a Zone Substation 2.4 Demonstrate an understanding of Network Operator nomenclature standards 2.5 Identify the procedure for commissioning new apparatus e.g. new transformers pre-commissioning tests, insulation tests, no-load voltage tests, phase sequence tests and phase-out tests 2.6 Demonstrate an understanding of the operation and precautions associated with Distribution and Sub-Transmission plant and equipment

Learning Outcome 3	Interpret HV single line diagrams and prepare a switching program
Assessment Criteria	3.1 Identify the meaning of various symbols used in single line diagrams 3.2 Demonstrate an ability to read a single line diagram, check that it is correct with the network system
Learning Outcome 4	Demonstrate switching processes, procedures and communication protocol for the safe switching of Zone Substations
Assessment Criteria	4.1 Demonstrate accurate and effective communications with the Control Centre 4.2 Demonstrate the use of a switching instruction while performing switching operations 4.3 Demonstrate the application of the “Systematic Approach to Switching” 4.4 Demonstrate the operation of a range of HV switchgear installed in a Zone Substation
Learning Outcome 5	Demonstrate effective communication protocol and earthing practices and procedures when earthing HV electrical apparatus for access
Assessment Criteria	5.1 Identify the requirements for isolation from primary and secondary voltages necessary for safe access under access authority conditions 5.2 Identify the dangers of the application of earth devices to high voltage apparatus 5.3 Identify and correctly use personal protective equipment (PPE) and safety equipment required for the safe application of high voltage earthing devices 5.4 Demonstrate the application of a “Systematic Approach to Earthing” 5.5 Demonstrate an understanding of the priority earthing system

Learning Outcome 6	Describe the purpose, preparation and procedure for use of operational forms, access authorities and permits associated with HV switching
Assessment Criteria	6.1 Identify the various formal options available for managing work in the vicinity of high voltage apparatus 6.2 Describe the need for maintaining security of high voltage installations, and for controlling the activity of people in these areas 6.3 Prepare barriers and signs for the safe access to nominated high voltage apparatus 6.4 Demonstrate knowledge of the Access Authority procedure, the responsibilities of people involved and its application in the workplace 6.5 Identify the requirements of additional access authorities associated with access to high voltage apparatus
Learning Outcome 7	Issue and cancel access authorities appropriate to the nominated tasks
Assessment Criteria	7.1 Demonstrate knowledge of procedures for the completion, issue and cancellation of an Electrical Access Authority 7.2 Prepare an Electrical Access Authority in accordance with accepted procedures and practices, which clearly defines safety precautions relating to access to high voltage apparatus 7.3 Conduct preliminary discussions with work party ensuring that the task can commence safely and issue an Electrical Access Authority for a specified task 7.4 Confirm work is completed and cancel Electrical Access Authority in accordance with procedures

Learning Outcome 8	Demonstrate an understanding of the functions and operation of common high voltage protection systems and suppression functionality
Assessment Criteria	8.1 Demonstrate an understanding of the functions and operation of protection systems 8.2 Identify relay indications that would occur for nominated faults on the high voltage system 8.3 Identify protection schemes 8.4 Describe the control circuit and supply system for protection systems
Learning Outcome 9	Demonstrate an understanding of identifying and switching the HV network in fault situations
Assessment Criteria	9.1 Describe how to effectively identify a faulted section of apparatus or plant 9.2 Explain how to efficiently isolate the faulted apparatus and restore supply under direction of the Control Centre 9.3 Describe the actions needed to liaise with other emergency services to make a faulted area safe 9.4 Demonstrate the actions necessary to coordinate on site repairs with work parties

High Voltage (HV) Switching – TSF (Terminal Switching Feeders)

Module purpose	This module provides the learner with the knowledge and skills to perform High Voltage Electrical Switching on; all distribution controlled feeder apparatus in Terminal Stations
Prerequisite	Perform substation switching operation to a given schedule – UETTDRSB39A This Competency Standard Units shall be delivered by an RTO
For whom	All personnel required to perform switching on the high voltage Sub Transmission and Distribution Network in Terminal Stations
Summary of content	• The Green Book • Roles and responsibilities • Network Operators Operational procedures • Safe Work Method Statements (SWMS) and site risk assessment process • Operation of HV and LV electrical apparatus • Interpretation of HV single line diagrams • Systematic approach to switching operations • Hazard identification and Operator protection • Personal protective equipment (PPE) and safety equipment • Use of Operating Instructions • Communications protocols • Earthing Procedures • Issue / cancellation of Electrical Access Authority/s for personnel working on or in the vicinity of HV apparatus • Restoration of supply • Fault finding and emergency response • Understanding of Protection schemes
Assessment	The practical assessment should remain flexible to allow where possible, the utilisation of scheduled work for assessment
Frequency	3 Yearly
Learning outcomes	On successful completion of this module the learner should be able to:

Learning Outcome 1	Locate, interpret, and apply appropriate Regulations, The Blue Book and The Green Book and Network Operators switching procedures relating to HV electrical safety
Assessment Criteria	1.1 Demonstrate a general knowledge of the structure of industry standards in relation to electrical safety 1.2 Demonstrate an ability to reference The Blue Book and The Green Book and Network Operators Switching Procedures 1.3 Demonstrate an ability to reference Network Operator Switching Procedures 1.4 Describe the function, roles and responsibilities of a Switching Operator for Distribution controlled feeder apparatus in Terminal Stations 1.5 Identify Safe Work Method Statements (SWMS) and site risk assessment process for HV switching 1.6 Identify the personal protective equipment (PPE) and safety equipment required for the safe operation of HV switchgear 1.7 Identify communications process with the Control Centre, work parties and other operators 1.8 Identify communications process for incident reporting in regards to switching operations
Learning Outcome 2	Demonstrate a working knowledge of the function, operation, and precautions associated with high voltage electrical apparatus and associated hardware
Assessment Criteria	2.1 Identify the capabilities of the typical range of switchgear installed in a Terminal Station 2.2 Identify the use of caution and danger tags 2.3 Describe the method of operation of typical high voltage switchgear and plant installed in a Terminal Station 2.4 Demonstrate an understanding of Network Operator nomenclature standards 2.5 Identify the procedure for commissioning new apparatus e.g. new transformers pre-commissioning tests, insulation tests, no-load voltage tests, phase sequence tests and phase-out tests 2.6 Demonstrate an understanding of the operation and precautions associated with Distribution and Sub-Transmission plant and equipment

Learning Outcome 3	Interpret HV single line diagrams and prepare a switching program
Assessment Criteria	3.1 Identify the meaning of various symbols used in single line diagrams 3.2 Demonstrate an ability to read a single line diagram, check that it is correct with the network system
Learning Outcome 4	Demonstrate switching processes, procedures and communication protocol for the safe switching of Zone Substations
Assessment Criteria	4.1 Demonstrate accurate and effective communications with the Control Centre 4.2 Demonstrate the use of a switching instruction while performing switching operations 4.3 Demonstrate the application of the “Systematic Approach to Switching” 4.4 Demonstrate the operation of a range of HV switchgear installed in a Terminal Station
Learning Outcome 5	Demonstrate effective communication protocol and earthing practices and procedures when earthing HV electrical apparatus for access
Assessment Criteria	5.1 Identify the requirements for isolation from primary and secondary voltages necessary for safe access under access authority conditions 5.2 Identify the dangers of the application of earth devices to high voltage apparatus 5.3 Identify and correctly use personal protective equipment (PPE) and safety equipment required for the safe application of high voltage earthing devices 5.4 Demonstrate the application of a “Systematic Approach to Earthing” 5.5 Demonstrate an understanding of the priority earthing system

Learning Outcome 6	Describe the purpose, preparation and procedure for use of operational forms, access authorities and permits associated with HV switching
Assessment Criteria	6.1 Identify the various formal options available for managing work in the vicinity of high voltage apparatus 6.2 Describe the need for maintaining security of high voltage installations, and for controlling the activity of people in these areas 6.3 Prepare barriers and signs for the safe access to nominated high voltage apparatus 6.4 Demonstrate knowledge of the Access Authority procedure, the responsibilities of people involved and its application in the workplace 6.5 Identify the requirements of additional access authorities associated with access to high voltage apparatus
Learning Outcome 7	Issue and cancel access authorities appropriate to the nominated tasks
Assessment Criteria	7.1 Demonstrate knowledge of procedures for the completion, issue and cancellation of an Electrical Access Authority 7.2 Prepare an Electrical Access Authority in accordance with accepted procedures and practices, which clearly defines safety precautions relating to access to high voltage apparatus 7.3 Conduct preliminary discussions with work party ensuring that the task can commence safely and issue an Electrical Access Authority for a specified task 7.4 Confirm work is completed and cancel Electrical Access Authority in accordance with procedures

Learning Outcome 8	Demonstrate an understanding of the functions and operation of common high voltage protection systems and suppression functionality
Assessment Criteria	8.1 Demonstrate an understanding of the functions and operation of protection systems 8.2 Identify relay indications that would occur for nominated faults on the high voltage system 8.3 Identify protection schemes 8.4 Describe the control circuit and supply system for protection systems
Learning Outcome 9	Demonstrate an understanding of identifying and switching the HV network in fault situations
Assessment Criteria	9.1 Describe how to effectively identify a faulted section of apparatus or plant 9.2 Explain how to efficiently isolate the faulted apparatus and restore supply under direction of the Control Centre 9.3 Describe the actions needed to liaise with other emergency services to make a faulted area safe 9.4 Demonstrate the actions necessary to coordinate on site repairs with work parties

High Voltage (HV) Switching – TS (Terminal Switching)

Module purpose	This module provides the learner with the knowledge and skills to perform High Voltage Electrical Switching on; all Transmission and Sub Transmission apparatus in Terminal Stations
Prerequisite	Perform substation switching operation to a given schedule – UETTDRIS45A. This Competency Standard Unit shall be delivered by an RTO
For whom	All personnel required to perform switching on the high voltage Transmission and Sub Transmission Network in Terminal Stations
Summary of content	• The Blue Book • Roles and responsibilities • Network Operators Operational procedures • Safe Work Method Statements (SWMS) and site risk assessment process • Operation of HV and LV electrical apparatus • Interpretation of HV single line diagrams • Systematic approach to switching operations • Hazard identification and Operator protection • Personal protective equipment (PPE) and safety equipment • Use of Operating Instructions • Communications protocols • Earthing Procedures • Issue / cancellation of Electrical Access Authority/s for personnel working on or in the vicinity of HV apparatus • Restoration of supply • Fault finding and emergency response • Understanding of Protection schemes • Understand an interpret system metering instruments • Understand and switch DC supplies to maintain supply • Awareness of HV field strengths in switchyards
Assessment	The practical assessment should remain flexible to allow where possible, the utilisation of scheduled work for assessment
Frequency	3 Yearly

Learning outcomes	On successful completion of this module the learner should be able to:
Learning Outcome 1	Locate, interpret, and apply appropriate Regulations, The Blue Book and Network Operators switching procedures relating to HV electrical safety
Assessment Criteria	1.1 Demonstrate a general knowledge of the structure of industry standards in relation to electrical safety 1.2 Demonstrate an ability to reference The Blue Book and Network Operators Procedures 1.3 Identify Safe Work Method Statements (SWMS) and site risk assessment process for HV switching 1.4 Identify the personal protective equipment (PPE) and safety equipment required for the safe operation of HV switchgear 1.5 Identify communications process with the Control Centre, work parties and other operators 1.6 Identify communications process for incident reporting in regards to switching operations
Learning Outcome 2	Demonstrate a working knowledge of the function, operation, and precautions associated with high voltage electrical apparatus and associated hardware
Assessment Criteria	2.1 Identify the capabilities of the typical range of switchgear installed in a Terminal Station 2.2 Identify the use of caution and danger tags 2.3 Describe the method of operation of typical high voltage switchgear installed in Terminal Station 2.4 Demonstrate an understanding of Network Operator nomenclature standards 2.5 Identify the procedure for commissioning new apparatus e.g. new transformers pre-commissioning tests, insulation tests, no-load voltage tests, phase sequence tests and phase-out tests 2.6 Demonstrate an understanding of the operation and precautions associated with Transmission and Sub Transmission equipment

Learning Outcome 3	Interpret HV single line diagrams and prepare a switching program
Assessment Criteria	3.1 Identify the meaning of various symbols used in single line diagrams 3.2 Demonstrate an ability to read a single line diagram, check that it is correct with the network system
Learning Outcome 4	Demonstrate switching processes, procedures and communication protocol for the safe switching in Terminal Stations
Assessment Criteria	4.1 Demonstrate accurate and effective communications with the Control Centre 4.2 Demonstrate the use of a switching instruction while performing switching operations 4.3 Demonstrate the application of the “Systematic Approach to Switching” 4.4 Demonstrate the operation of a range of HV switchgear installed in a Terminal Station
Learning Outcome 5	Demonstrate effective communication protocol and earthing practices and procedures when earthing HV electrical apparatus for access
Assessment Criteria	5.1 Identify the requirements for isolation from primary and secondary voltages necessary for safe access under access authority conditions 5.2 Identify the dangers of the application of earth devices to high voltage apparatus 5.3 Identify and correctly use personal protective equipment (PPE) and safety equipment required for the safe application of high voltage earthing devices 5.4 Demonstrate the application of a “Systematic Approach to Earthing”

Learning Outcome 6	Describe the purpose, preparation and procedure for use of operational forms, access authorities and permits associated with HV switching
Assessment Criteria	6.1 Identify the various formal options available for managing work in the vicinity of high voltage apparatus 6.2 Describe the need for maintaining security of high voltage installations, and for controlling the activity of people in these areas 6.3 Prepare barriers and signs for the safe access to nominated high voltage apparatus 6.4 Demonstrate knowledge of the Access Authority procedure, the responsibilities of people involved and its application in the workplace 6.5 Identify the requirements of additional access authorities associated with access to high voltage apparatus
Learning Outcome 7	Issue and cancel access authorities appropriate to the nominated tasks
Assessment Criteria	7.1 Demonstrate knowledge of procedures for the completion, issue and cancellation of an Electrical Access Authority 7.2 Prepare an Electrical Access Authority in accordance with accepted procedures and practices, which clearly defines safety precautions relating to access to high voltage apparatus 7.3 Conduct preliminary discussions with work party ensuring that the task can commence safely and issue an Electrical Access Authority for a specified task 7.4 Confirm work is completed and cancel Electrical Access Authority in accordance with procedures

Learning Outcome 8	Demonstrate an understanding of the functions and operation of common high voltage protection systems and suppression functionality
Assessment Criteria	8.1 Demonstrate an understanding of the functions and operation of protection systems 8.2 Identify relay indications that would occur for nominated faults on the high voltage system 8.3 Identify protection schemes 8.4 Describe the control circuit and supply system for protection systems
Learning Outcome 9	Demonstrate an understanding of identifying and switching the HV network in fault situations
Assessment Criteria	9.1 Describe how to effectively identify a faulted section of apparatus 9.2 Explain how to efficiently isolate the faulted apparatus and restore supply under direction of the Control Centre 9.3 Describe the actions needed to liaise with emergency services 9.4 Demonstrate the actions necessary to coordinate on site repairs with work parties

Module purpose	This module provides the learner with the knowledge and skills to enable them to work on or near Live Low Voltage apparatus
For whom	For persons required to perform live LV cable jointing
Frequency	3 Yearly
Summary of content	• The Green Book • Industry work practices and procedures • Live LV cable jointing work practices and procedures • Live LV work at Ground level work practices and procedures • Risk Assessment • Cable testing procedures • Safety with LPG equipment • Live Low Voltage work practices and procedures ~ Personal protective equipment (PPE) ~ Safety equipment • Safety observer role and responsibilities
Learning outcomes	On successful completion of the module the learner should be able to:
Learning outcome 1	Identify the general safe work practices and procedures for live LV cable jointing
Assessment criteria	1.1 Identify and explain the clauses within The Green Book relating to working on Live Low Voltage 1.2 Describe the risk assessment process and Identify and document the risks and controls appropriate to the task 1.3 Describe the set up for a rescue situation

Learning outcome 2	Plan and prepare for Live LV electrical work
Assessment criteria	2.1 Obtain and correctly interpret all relevant procedures in preparation of performing the work
	2.2 Identify and interpret all technical drawings required to complete the task
	2.3 Identify the personal protective equipment (PPE) and safety equipment for live LV work
	2.4 Identify the resources required including plant, tools and equipment
	2.5 Prepare work site to enable work to be performed in a safe manner, and in accordance with regulatory requirements
	2.6 Identify the tasks that can be carried out using live work techniques
	2.7 Identify the safe working practices and procedures associated with working on live low voltage apparatus
Learning outcome 3	Demonstrate the work practice for jointing and testing live low voltage underground cables
Assessment criteria	3.1 Prepare cable in accordance with industry jointing practices
	3.2 Demonstrate the correct setup for a rescue situation
	3.3 Identify and correctly use personal protective equipment (PPE) and safety equipment for working on live low voltage apparatus
	3.3 Demonstrate a Live LV cable joint using the appropriate work place procedures
	3.4 Demonstrate the safe working practices and procedures associated with working on live low voltage apparatus
	3.5 Conduct an insulation resistance test
	3.6 Conduct a polarity and Neutral and Supply Testing (NST) where required
	3.7 Conduct a phase sequence test where required

Learning Outcome 4	Identify precautions required for working safely on conductive structures
Assessment criteria	4.1 Identify the associated risks in regards to conductive structures ~ Cables on conductive poles/structures ~ Roofs/verandas ~ Communications cables/catenaries 4.2 Describe the principles of personal separation 4.3 Describe the work practices for work performed on or near conductive structures
Learning outcome 5	Identify the requirements and responsibilities of a Safety Observer in relation to LV Live work
Assessment criteria	5.1 Identify the roles and responsibilities of a safety observer/s during a Live LV task 5.2 Identify environmental influences that may contribute to distraction of a safety observer 5.3 Identify the ergonomic requirements in relation to the positioning of the safety observer to be and remain effective 5.4 Identify methods of communication between the safety observer and the Live LV worker/s 5.5 Demonstrate an Understanding of the Importance of accepting Safety Instructions & Warnings from a Safety Observer

Live Low Voltage (LV) Work – Ground Level

Module purpose	This module will provide the learner with the knowledge and skills to enable them to work on or near Live Low Voltage apparatus
For whom	All personnel who are required to work on live low voltage apparatus at ground level. This program does not include or replace training required for Cable Jointers or Lineworkers performing their work
Frequency	Three yearly
Summary of content	• The Green Book • Industry work practices and procedures • Live low voltage work practices and procedures ~ Protection from electric shock ~ Personal Protective Equipment • Risk assessment • Role and responsibility of the "Safety Observer • Asset identification and their inherent hazards • Specialised equipment ~ Insulating mats and covers ~ Insulated tools
Learning outcomes	On successful completion of the module the learner should be able to:
Learning outcome 1	Identify the policies, safety instructions and general safe work practices and procedures for live LV work
Assessment criteria	1.1 Identify and explain various clauses within The Green Book relating to working on Live Low Voltage 1.2 Describe the risk assessment process and identify the risks and controls associated with working on ground level live low voltage apparatus 1.3 Describe the correct set up for a rescue situation

Learning outcome 2	Plan, prepare and carry out Live LV electrical work at Ground level
Assessment criteria	2.1 Identify and document the risks and controls appropriate to the task
	2.2 Identify and correctly use personal protective equipment (PPE) and safety equipment for working on live low voltage apparatus
	2.3 Prepare work site to enable work to be performed in a safe manner, and in accordance with regulatory requirements
	2.4 Perform appropriate work methods to replace/install energised LV electrical apparatus and associated hardware
	2.5 Demonstrate safe working practices and procedures associated with working on live low voltage apparatus
	2.6 Demonstrate the correct setup for a rescue situation
Learning Outcome 3	Identify precautions required for working safely on conductive structures
Assessment criteria	3.1 Identify the associated risks in regards to conductive structures
	3.2 Describe the principles of personal separation
	3.3 Describe the work practices for work performed on or near conductive structures
Learning outcome 4	Identify the requirements and responsibilities of a Safety Observer in relation to Live LV work
Assessment criteria	4.1 Identify the roles and responsibilities of a safety observer/s during a Live LV task
	4.2 Identify environmental influences that may contribute to distraction of a safety observer
	4.3 Identify the ergonomic requirements in relation to the positioning of the safety observer to be and to remain effective
	4.4 Identify methods of communication between the safety observer and the Live LV worker/s
	4.5 Demonstrate an understanding of the importance of accepting safety instruction & warnings from a safety observer

Live Low Voltage (LV) Work - Overhead

Module purpose	This module provides the learner with the knowledge and skills to enable them to work on or near Live Low Voltage apparatus
For whom	Electrical workers who work on or near Live LV electrical apparatus
Frequency	Three yearly
Summary of content	• The Green Book • Industry work practices and procedures • Live LV work procedures • Risk assessment • 8 most important things • Role and responsibility of the “Safety Observer” • LV pillars - sealing • Conductive Structures Procedures ~ Personal separation ~ Cables on conductive poles ~ Tram/Train structures ~ Traction Electrolysis Cables ~ Roofs/verandas ~ Communications cables/catenaries ~ Supervisory Cables
Learning outcomes	On successful completion of the module the learner should be able to:
Learning outcome 1	Identify the policy, safety instructions and general safe work practices and procedures for live LV work
Assessment criteria	1.1 Identify and explain various clauses within The Green Book relating to working on Live Low Voltage 1.2 Describe the risk assessment process and Identify and document the risks and controls appropriate to the task 1.3 Describe the correct set up for a rescue situation

Learning outcome 2	Plan, prepare and carry out Live LV electrical work
Assessment criteria	2.1 Identify and document the risks and controls appropriate to the task 2.2 Identify and correctly use personal protective equipment (PPE) and safety equipment for working on live low voltage apparatus 2.3 Prepare work site to enable work to be performed in a safe manner, and in accordance with regulatory requirements 2.4 Demonstrate the “8 most important things” when working on Live LV appropriate to the work location 2.5 Perform appropriate work methods to replace/install LV electrical apparatus and associated hardware with conductors energised 2.6 Demonstrate the safe working practices and procedures associated with working on live low voltage apparatus 2.8 State the responsibilities of the “Safety Observer” within the LV task 2.9 Demonstrate the correct setup for a rescue situation
Learning Outcome 3	Identify precautions required for working safely on conductive structures
Assessment criteria	3.1 Identify the associated risks in regards to conductive structures ~ Cables on conductive poles ~ Tram/Train structures ~ Traction Electrolysis Cables ~ Roofs/verandas ~ Communications cables/catenaries ~ Supervisory Cables 3.2 Describe the principles of personal separation 3.3 Describe the work practices for work performed on or near conductive structures

Learning outcome 4	Demonstrate a basic understanding of appropriate forms and documents relating to LV installations
Assessment criteria	4.1 Demonstrate an understanding and the correct use of a Certificate of Electrical Safety (Prescribed and Non-prescribed) 4.2 Demonstrate an understanding and the correct use of a Notice of Installation Defect 4.3 Demonstrate an understanding and the correct use of a Statement of Isolation of Low Voltage Supply (SILV)
Learning outcome 5	Identify the requirements and responsibilities of a Safety Observer in relation to LV Live work
Assessment criteria	5.1 Identify the roles and responsibilities of a safety observer/s during a Live LV task 5.2 Identify environmental influences that may contribute to distraction of a safety observer 5.3 Identify the ergonomic requirements in relation to the positioning of the safety observer to be and remain effective 5.4 Identify methods of communication between the safety observer and the Live LV worker/s 5.5 Demonstrate an Understanding Of The Importance Of Accepting Safety Instruction & Warnings From A Safety Observer

Module purpose

This module provides the learner with the knowledge and skills to complete an “Application Form” for specified types of work

This module can be used for both refresher training and initial training

For whom

All personnel required to make application for specified types of work

Frequency

Three yearly

Summary of content

- Relevant clauses from The Blue Book and The Green Book
- Why an Application is used
- When an Application is required
- Purpose of the Application
- Planning timeframes for lodging Applications
- The “Application For…” form
  - ~ Information required on the form
  - ~ Associated information required
- Overview of associated forms
  - ~ Electrical Access Authority
  - ~ Vicinity Authority
  - ~ Permit to Work
  - ~ Sanctions for Testing
  - ~ Statement of Condition of Apparatus/Plant
  - ~ Notice of Work on Apparatus
- Job Planning
  - ~ Identify the job location
  - ~ Identify the work to be done
  - ~ Identify known hazards
  - ~ Determine special requirements
- Practical Application writing

Learning outcomes

On successful completion of this module the learner should be able to:

Learning outcome 1

Demonstrate an understanding of the principles and responsibilities of the applicant when making applications for work on various electrical apparatus

Assessment criteria

1.1 Demonstrate a knowledge and the ability to apply The Blue Book and The Green Book clauses applicable to making an application

1.2 Identify the reasons why an application is necessary, its purpose and when an application is required

1.3 Identify the "Application For…" form and the requirements to complete an application for nominated tasks

1.4 Identify the business operation requirements for nominated tasks and timeframes, involved with the booking of the network and or resources and the timely delivery of paperwork

1.5 Describe the responsibilities of the applicant in relation to preparing and submitting an application

Learning outcome 2

Demonstrate knowledge of the various types of Access Authorities which may be applied for on the Application Form and the associated information required

Assessment criteria

2.1 Describe the requirements for application for:

- ~ Electrical Access Permit
- ~ Sanction for Tests
- ~ Authority to carry out maintenance using live line procedures
- ~ Notification to work on apparatus
- ~ Live Line work / Auto reclose suppressions
- ~ Statements of condition of plant
- ~ High Voltage Switching / Plant Outages
- ~ Vicinity Authority
- ~ Permit to Work
- ~ Statement of Isolation of Low Voltage Apparatus

2.2 Describe the relevant documentation to be submitted with each application for the range of application types

2.3 The ability to interpret design information and electrical diagrams associated with the job

Learning outcome 3	Successfully prepare an application in relation to job planning, design criteria and resource requirements
Assessment criteria	3.1 Identify the job location 3.2 Identify the work to be done 3.3 Identify known hazards 3.4 Determine special requirements 3.5 Determine resource requirements 3.6 Prepare practical examples of applications

Making LV Dead

Module purpose	This module provides the learner with the knowledge and skills to enable them to Isolate & make low voltage dead
For whom	Workers who have the required LV field Switching competency and undertake LV Field Switching.
Frequency	3 Yearly
Summary of content	• The Green Book • Industry work practices and procedures • Isolating & making low voltage dead • LV Access Authority/Permits/SILV's • Restoring supply • Paralleling – phase test, primary voltage differences • Switch wire, multi phasing • Risk Assessment
Learning outcomes	On successful completion of the module the learner should be able to:
Learning outcome 1	Identify the policy, procedures, safety instructions and work practices for Making LV Dead
Assessment criteria	1.1 Identify and explain various clauses within The Green Book on Low Voltage Electrical Apparatus relating to making LV Dead 1.2 Describe the risk assessment process and Identify and document the risks and controls appropriate to the task 1.3 Describe the requirements for access to LV apparatus under Access Authority conditions 1.4 Describe the requirements for paralleling including; phase testing and testing for primary voltage differences 1.5 Identify the various LV Access Authority/Permits and describe the circumstances where they are used

Learning outcome 2	Isolate, make dead and restore supply to a section of LV apparatus
Assessment criteria	2.1 Demonstrate the safe working practices and work methods used to operate energised LV apparatus 2.2 Demonstrate Isolating and making LV apparatus dead 2.3 Prepare an Electrical Access Permit in accordance with Network Operator procedures 2.4 Confirm work is completed and cancel Electrical Access Permit in accordance with Network procedures 2.5 Demonstrate the method to remove LV bonder/s and restore supply

Module purpose	This module provides the learner with the knowledge and skills to identify, recognise the need for, and adopt methods to control manual handling risks, thereby reducing the frequency of injuries This module can be used for both refresher training and initial training
For whom	All field personnel who carry out manual handling tasks
Frequency	3 Yearly
Summary of content	• Occupational Health & Safety Act 2004 • Manual Handling Code of Practice 2000 • Risk Assessment and Control • Effects of manual handling on the body • Factors resulting in manual handling injuries • Preventive back and neck care • Manual handling techniques • Control strategies ~ Work organisation ~ Job & task design • Local manual handling issues
Learning outcomes	On successful completion of this module the learner should be able to:
Learning outcome 1	Identify the regulations and hazards associated with Manual Handling in the workplace
Assessment criteria	1.1 Identify the regulatory requirements for Manual Handling in the workplace 1.2 Undertake risk identification, risk assessment and risk control for tasks involving manual handling in the local work environment
Learning outcome 2	Demonstrate safe manual handling techniques
Assessment criteria	2.1 Identify workplace and personal factors, which may result in manual handling injuries, and implement risk control strategies 2.2 Apply the safe principles of manual handling required to lift, push, pull, carry & restrain

Measuring Conductor Heights Using Telescopic Measuring Sticks

Module purpose

This module provides the learner with the knowledge and skills to measure low and/or high voltage conductor heights using a telescopic measuring stick

This module can be used for both refresher training and initial training

For whom

Personnel whose task involves the use of insulated sticks as measuring devices on, or in the vicinity of, high and/or low voltage network subject to Network Operator approval.
This does not include personnel who have the required competencies (e.g. Lineworker, HV switching Operator) in HV and/or LV switching dependant on the voltage being measured.

Frequency

Three yearly

Summary of content

- The Green Book 2013
  - Safe approach distances
  - Personal Protective Equipment
  - Fit state for work
  - Use and inspection of Operating and Live Line Sticks
  - Contact with live HV conductors by means of appliances
- Risk / Hazard assessment
- Electrical Distribution System
  - Apparatus recognition
  - System voltage recognition (Low and High Voltages)
- Care and use of insulated measuring sticks
  - Insulated and tested portions
  - Safe use of telescopic sticks
    - Methods of control
    - Knocking and bumping fuses
    - Clashing conductors
- Traffic Management awareness

Learning outcomes

On successful completion of this module the learner should be able to:

Learning outcome 1

Describe the function, roles and responsibilities required of a person measuring conductor height using a telescopic stick

Assessment criteria

1.1 Identify and explain clauses within The Green Book relating to the general safety requirements

1.2 Identify and explain clauses within The Green Book relating to Contact with live HV conductors by means of appliances

1.3 Identify and explain clauses within The Green Book relating to the work in the vicinity of electrical apparatus.

1.4 Identify and explain clauses within The Green Book relating to the safe approach to electrical apparatus.

1.5 Identify the use and application of operational procedures related to measuring conductor height with a telescopic stick.

1.6 Describe the risk assessment process including SWMS and JSA's and identify the risks and controls associated with measuring conductor heights using a telescopic stick.

Learning outcome 2

Identify electrical apparatus, equipment and voltages within the Victorian Electrical Distribution System

Assessment criteria

2.1 Identify HV & LV electrical apparatus and equipment used within the electrical distribution networks.

2.2 Identify the Voltages used within the electrical distribution networks.

Learning outcome 3

Identify techniques for the safe use of Telescopic Sticks in relation to measuring the height of conductors

Assessment criteria

3.1 Identify the relevant enterprise procedures for the safe use of Telescopic Sticks in relation to measuring the height of conductors.

3.2 Identify the construction types that can be measured with the safe use of measuring height sticks

3.3 Identify the care and maintenance requirements for HV insulating sticks including:

- Storage
- Inspection of equipment prior to use
- electrical testing of HV sticks

Measuring Conductor Heights Using Telescopic Measuring Sticks

Learning outcome 4	Demonstrate the safe use of Telescopic Sticks in relation to measuring the height of conductors
Assessment criteria	4.1 Complete a Job Safety Assessment (JSA) prior to commencing a task including hazard identification, risk assessment and risk control
	4.2 Demonstrate the identification of HV & LV conductors and the hazards at the worksite
	4.3 Measure and record conductor heights at nominated locations
	4.4 Demonstrate the correct ergonomic use of a telescopic stick
Learning outcome 5	Identify the traffic management requirements for short term work
Assessment criteria	5.1 Identify the requirements for short term works as identified in the Victorian Traffic Management Act and/or Code of Practice

No Go Zone Assessor

Please refer to the Network Operator for specific training requirements.

Frequency Three Yearly

Receive Sanction for Testing

Module purpose	This module provides the learner with the knowledge and skills to receive Sanction for Testing (SFT) as required by The Blue Book and The Green Book This module can be used for both initial and refresher training
For whom	Personnel who will be required to receive SFT for the purpose of gaining access to electrical apparatus to perform electrical testing that cannot be completed under the terms of an Electrical Access Permit (EAP)
Frequency	Three yearly
Summary of content	• The Blue Book and The Green Book • Organisational Requirements • Use of a “SFT” and “Complimentary SFT” • SFT information requirements • Responsibilities of the Authorised Tester • Responsibilities of the Tester in Charge • Responsibilities of the Tester in Charge at a remote location • Issue and cancellation of the SFT ~ Communications process • Dealing with changes to plant conditions, SFT conditions and an emergency on site • Uses of isolation, earthing, tagging, locking, barriers and notices as applicable to SFT • Hazards associated with carrying out tests in a live environment • High potential test not shorting out current transformers • Operation of back up earth leakage • Identification and application of additional safety precautions to protect people, continuity of supply and the asset • Protective Safety apparel • Precautions for safe entry into High Voltage (HV) enclosures

Receive Sanction for Testing

Learning outcomes	On successful completion of this module the learner should be able to:
Learning outcome 1	Identify the requirements of the SFT Procedures used within the Electrical Supply Industry
Assessment criteria	1.1 Identify and explain various clauses within The Blue Book and The Green Book relating to the Sanction for Testing Procedure and the access of HV and Low Voltage (LV) electrical apparatus under a SFT 1.2 Describe the information required for the completion of the SFT form 1.3 Define the responsibilities of the Tester in Charge 1.4 Define the responsibilities of Authorised Tester and test party 1.5 Identify the communication process used between a work party and the operator including issue, cancellation and dealing with changes to plant conditions, SFT conditions and an emergency on site 1.6 Demonstrate an understanding of the relevant business' organisational procedures
Learning outcome 2	Identify the hazards associated with electrical apparatus in a manner other than prescribed by the EAP procedure
Assessment criteria	2.1 Demonstrate a working knowledge of the uses of isolation, earthing tagging, locking, barriers and notices as applicable to the SFT 2.2 Demonstrate a working knowledge of the test equipment to be used and the safety hazards they may introduce, either to the apparatus, personnel or the public 2.3 Demonstrate an ability to identify and apply additional safety precautions to protect people, continuity of supply and the asset
Learning outcome 3	Demonstrate the ability to safely and effectively be a tester in charge of a test site with due consideration of the task at hand, members of the work party and the general public
Assessment criteria	3.1 Demonstrate a working knowledge and skill associated with the relevant: ~ Forms and documents ~ Risk Assessment ~ Work Procedures ~ Equipment and plant 3.2 Demonstrate an acquired knowledge of the SFT process through participation in a practical exercise

Safe to Approach SWER

Module purpose	This module provides the learner with the knowledge and skills to implement a "Safe to Approach" inspection and test procedure to high voltage electrical apparatus This module can be used for both refresher training and initial training
For whom	All personnel who perform work in the vicinity of Single Wire Earth Return (SWER) electrical apparatus
Frequency	Three Yearly
Summary of content	• The Blue Book and The Green Book • SWER Safe to Approach procedure • Apparatus with internal phase to earth supply • Faulty earthing systems ~ Associated dangers ~ Symptoms of faulty earth systems ~ SWER earth repair • Equipment requirements • Results and action to be taken • Energising SWER Substations
Learning outcomes	On successful completion of this module the learner should be able to:
Learning outcome 1	Identify electrical hazards related to earthing systems
Assessment criteria	1.1 Explain how earthing systems function. 1.2 Identify the dangers and symptoms associated with faulty earths in a phase to earth system
Learning Outcome 2	Safely approach apparatus with phase to earth systems
Assessment criteria	2.1 Identify the methods used to minimise risks associated with damaged earth systems 2.2 Perform a "Safe to Approach" test
Learning Outcome 3	Identify the procedure to energise a SWER substation following earthing system repairs
Assessment criteria	3.1 Identify the possible hazards associated with energising SWER substations 3.2 Identify the methods used to energise a SWER substation upon completion of earthing system repairs and place on load

Safe to Climb

Module purpose	This module provides the learner with the knowledge, skills and competencies to conduct a “Safe to Climb” test This module can be used for both refresher training and initial training
For whom	All personnel who require working aloft on pole structures
Frequency	Three yearly
Summary of content	Safe to Climb Test • Push and rope tests • Pole types • Categories of poles ~ Serviceable ~ Limited Life poles ~ Unserviceable poles • Visual inspection of poles ~ Identification discs ~ Fungi, wood rot, white ants ~ Lightening damage, splitting, burns ~ Cracked concrete, rust ~ Leaning poles, hardware • Staked, Power beamed and re-butted poles • Types of detection tests • Supporting leaning poles • Ladders
Learning outcomes	On successful completion of this module the learner should be able to:
Learning outcome 1	Identify the requirements for conducting an inspection of a pole prior to climbing
Assessment criteria	1.1 Identify the reasons for and methods used when performing a safe to climb test prior to climbing poles 1.2 Identify defects that affect the strength of wood, concrete and steel poles 1.3 List the categories and appropriate markings allocated to poles upon completion of an inspection 1.4 Identify the affect that staking and re-butting has on the classification of the pole 1.5 Identify the requirements for minor and major works

Learning outcome 2	Identify and demonstrate the methods used to determine a pole is safe to climb
Assessment criteria	2.1 Identify and demonstrate the methods of performing a safe to climb test prior to climbing a pole, (for example push or rope test)
	2.2 Identify methods to make a pole safe to climb
Learning outcome 3	Demonstrate the knowledge and skills in the safe use of a ladder
Assessment criteria	3.1 Demonstrate the correct safe use and handling of ladders to the relevant standards, codes of practice and regulations
Learning outcome 4	Demonstrate an understanding of the requirements to maintain balanced loads on poles during maintenance activities
Assessment criteria	4.1 Identify the forces exerted on poles in a variety of situations including intermediate, strain, tee-off and angle poles
	4.2 Identify the activities that may affect the forces being exerted on the structures and the possible consequences of altered loadings
	4.3 Describe suitable methods to provide temporary support to structures where construction activities may affect the forces exerted on the structure or adjacent structures

Traffic Management: Control traffic with stop-slow bat - RIIWHS205D

This Competency Standard Unit is published at www.training.gov.au

Frequency	Three yearly
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial, competency assessment and Refresher training

Traffic Management: Implement traffic management plan - RIIWHS302D

This Competency Standard Unit is published at www.training.gov.au

Frequency	Three yearly
Delivery	This Competency Standard Unit shall be delivered by an RTO for initial, competency assessment and Refresher training

Module purpose	This module provides the learner with the knowledge and skills to understand key principles of environmental management This module can be used for both refresher training and initial training
For whom	All personnel who are required to work on or near the electricity network assets
Frequency	Three yearly
Summary of content	• Environmental Legislation & Penalties ~ Legislative Requirements ~ Management responsibilities ~ Supervisors & Field responsibilities ~ Role of EPA • Environmental Management Systems (EMS) • Understanding Waste Management • Managing Oil Spills ~ Stopping spills at the source ~ Sorbents and absorbent – materials, uses and types ~ Containment Dams and Weirs, creeks, drains, waterways ~ Spill Response and Process's ~ Disposal Options ~ Spill Response Flow Chart ~ Personal protective equipment (PPE) and safety equipment ~ Notification and reporting of incidents • SF6 gas leaks ~ Hazards ~ Precautions to follow • PCB's ~ Hazards ~ Precautions to follow

Learning outcomes

On successful completion of this module the learner should be able to:

Learning outcome 1

Explain the basic legal requirements of Environmental Legislation which apply to the Electricity Supply Industry

Assessment criteria

1.1 State the purpose of Environmental Legislation (State & Commonwealth)

1.2 Define the employees' responsibilities in accordance with relevant statutory requirements

1.3 Identify the roles and responsibilities of an employee and or employers in relation to the act

1.4 Explain the meaning of due diligence

1.5 Explain the Role of the Environmental Protection Agency (EPA)

Learning outcome 2

Explain the importance of an environmental management system and the basic elements of the system

Assessment criteria

2.1 State the goal of a EMS

2.2 State the key environmental requirements for example

- ~ Air Environment
- ~ Water
- ~ Soil
- ~ Noise
- ~ PCBs
- ~ SF6
- ~ Litter
- ~ Oil Spills
- ~ Sediment containment

Learning outcome 3

Explain the basic principles of waste management

Assessment criteria

3.1 Identify possible wastes generated in the electricity supply field

3.2 Explain the reasons for managing waste

3.3 Explain methods for the disposal of waste materials

Learning outcome 4	Describe how to containment and dispose of an oil spill
Assessment criteria	4.1 State the Environmental risk and impact of an oil spill 4.2 Identify potential situations where oil spills may occur 4.3 Identify how to contain a minor oil spill effectively 4.4 Identify how to contain a major oil spill effectively 4.5 Identify a clear understanding of procedures for reporting an oil spill incident 4.6 Identify the personal protective equipment (PPE) and safety equipment when managing oil spills
Learning outcome 5	Describe the hazards and precautions associated with SF6 gas and PCB's found within electrical equipment
Assessment criteria	5.1 Identify the possible hazards associated with SF6 gas and the safety precautions to be followed 5.2 Identify the possible hazards associated with PCB's and the safety precautions to be followed
Learning outcome 6	Identify the basic principles of sediment control
Assessment criteria	6.1 Identify how to prevent and contain sediment run-off from work sites and properties in order to protect waterways and prevent adverse impact on the environment

Module purpose	This module provides the learner with the knowledge to understand the purpose and intention of the Occupational Health & Safety (OH&S) Act and associated legislations and regulations This module can be used for both refresher training and initial training
For whom	All VESI personnel who are required to work on or near the electricity network assets
Frequency	Three yearly
Summary of content	• OH&S Act • Electrical Safety Act (Section 43/41) • General duty of care • Rights and responsibilities of employers and employees • Legislations and Regulations update • Australian Standards update • Risk Assessment process • Incident reporting • Prevention of Falls Regulations and Codes of Practice • Asbestos Management
Learning outcomes	On successful completion of this module the learner should be able to:
Learning outcome 1	State the basic legal requirements of the OH&S Act
Assessment criteria	1.1 State the aims and objectives of the OH&S Act 1.2 Explain what is meant by duty of care 1.3 Identify the responsibilities of employers and employees according to the OH&S Act
Learning outcome 2	Identify the importance of compliance with relevant Legislation, Regulations and VESI codes of practices relating to OH&S
Assessment criteria	2.1 Describe the important features and implications of legislation relevant to the workplace

Learning outcome 3	Identify the requirements of performing a job safety assessment (JSA) to determine possible workplace hazards and assigning appropriate risk control measures
Assessment criteria	3.1 State the purpose of performing a JSA 3.2 Describe the process of hazard identification and the allocation of suitable risk control measures to overcome the identified risk
Learning outcome 4	Demonstrate the requirements for reporting accidents and incidents as required by the Energy Safe Victoria (ESV), WorkSafe Victoria and within the workplace
Assessment criteria	4.1 Identify the employers and employees responsibilities related to the reporting of accidents or incidents that occur in the workplace 4.5 Identify the information that is to be recorded in the register of injuries by the employers in the event of an incident or accident occurring
Learning outcome 5	Demonstrate an understanding of the regulatory requirements for the prevention of falls in the workplace
Assessment criteria	5.1 Identify the responsibilities of the employer with regards meeting the requirements of the OH&S (Prevention of Falls) Regulations 2003 5.2 Identify the responsibilities of the employee with regards meeting the requirements of the OH&S (Prevention of Falls) Regulations 2003 5.3 Identify the definitions of the terms used within the Falls Preventions Regulations 5.4 Describe practical examples relevant to the electrical distribution industry of: ~ Passive fall prevention ~ Work Positioning systems ~ Fall injury prevention systems ~ Administrative control 5.5 Describe the process of task assessment, risk assessment and use of the hierarchy of risk control measures

Learning outcome 6	Identify the hazards and regulations associated with handling material containing asbestos fibre
Assessment criteria	6.1 Describe the personal dangers of coming into contact with materials containing asbestos fibre 6.2 Identify common materials, apparatus and locations within the work environment that have been or could be identified as being an asbestos risk 6.3 Identify the regulatory requirements for the safe handling of materials within the work environment identified as being an asbestos risk

Wash HV Insulators

Please refer to the Network Operator for specific training requirements.

Frequency Three Yearly

Apply ESI safety rules, codes of practice and procedures for work on or near electrical apparatus - UETTDRRF01B

This Competency Standard Unit is published at www.training.gov.au

Frequency Initial only

Delivery This Competency Standard Unit shall be delivered by an RTO

Working safely near live electrical apparatus as a non-electrical worker - UETTDREL14A

This Competency Standard Unit is published at www.training.gov.au

Frequency Initial only

Delivery This Competency Standard Unit shall be delivered by an RTO

Special Reader

Module purpose:

This module provides the learner with the knowledge and skills to safely perform Special Meter Reader duties

This module can be used for both refresher training and initial training

For whom:

Special Readers

Frequency:

Initial Only

Delivery:

Shall be delivered by a training organisation approved by the Network Operator

Summary of content:

- Network Operator, VESI and Australian Standards,
- Basic Electrical Theory
- Distribution systems of supply
- Working safely near live electricity
  - ~ Correct use of PPE
  - ~ JSA's and SWMS
  - ~ Correct Circuit identification
  - ~ Hazardous and illegal wiring
  - ~ Alternate supplies
- Premise identification
  - ~ Single/multiple occupancy
  - ~ Network Operator Service and/or Trouble Order procedures
- Circuit protection
  - ~ Correct fuse type and size
- Meter types and meter arrangements
  - ~ Electromechanical
  - ~ Electronic
  - ~ Advanced Metering Infrastructure
  - ~ CT Metering
  - ~ Meter enclosures and power industry keys
  - ~ Customer equipment (contactors, CB's SCCD's)
- Tariff standards
  - ~ Metrology procedures
- Isolation processes
  - ~ Isolation methods, fuse extraction sticks
  - ~ No access to isolation points
  - ~ Isolation confirmation

Summary of content (cont.):

- Meter reading
  - ~ Electromechanical
  - ~ Electronic
  - ~ Advanced Metering Infrastructure
- Record keeping
  - ~ Portable data entry devices
- Re-energisation processes
  - ~ Re-connection confirmation e.g. meter rotation
- Security of metering equipment
  - ~ Meter tampering
  - ~ Sealing equipment

Learning outcomes

On successful completion of this module the learner should be able to:

Learning outcome 1

Identify the relevant Australian Standards, VESI and Network Operator procedures related to the Special Reader role

Assessment criteria

1.1 Identify and explain various clauses within relevant industry standards

1.2 Describe the risk assessment process and identify and record the risks and controls associated with the Special Reader function

1.3 Describe the Network Operator work instructions and safety standards

Learning outcome 2

Understand the basics of electrical theory and Victorian electricity distribution systems

Assessment criteria

2.1 Describe the basics of Ohms Law and the principles of circuit protection

2.2 Explain what is meant by duty of care

2.3 Demonstrate an understanding of Victorian low voltage service connections including overhead and underground, single and multi-phase connections including correct circuit identification

2.4 Describe the effect that electricity has on the human body

Learning outcome 3	Understand the minimum requirements to ensure worker safety at customer installations
Assessment criteria	3.1 Correctly identify and select the personal protective equipment (PPE) for the task 3.2 Identify the risks and controls appropriate to the task (SWMS and JSA) 3.3 Prepare work site to enable work to be performed in a safe manner, and in accordance with Network Operator requirements 3.4 Correctly identify the reporting requirements for illegal and/or hazardous wiring arrangements 3.5 Identify the types of alternate supplies and describe the hazards they can create
Learning outcome 4	Be able to correctly identify a customer premises
Assessment criteria	4.1 Correctly identify installations within a single and or multiple occupancy arrangement
Learning outcome 5	Identify the different types of meter arrangements and the and customers equipment
Assessment criteria	5.1 Identify the correct fuse sizes for the different types of installation arrangements 5.2 Identify and describe all meter types used by the Network Operator 5.3 Describe differing types of meter enclosures and the correct use of Power Industry keys 5.4 Describe the differing types of customer equipment found in meter enclosures
Learning outcome 6	Describe the purpose of tariffs and the differing types according to Victorian Metrology Procedures
Assessment criteria	6.1 Demonstrate an understanding of tariff types 6.2 Identify and ensure correct tariffs are applied at customer premises

Learning outcome 7	Demonstrate effective isolation processes to ensure safe work
Assessment criteria	7.1 Identify the correct isolation point for various installation types
	7.2 Demonstrate correct isolation procedures and confirm isolation
	7.3 Describe the process to respond to no access to isolation points
Learning outcome 8	Demonstrate an understanding of various meter reading methods
Assessment criteria	8.1 Demonstrate the ability to accurately read all relevant meter types
Learning outcome 9	Demonstrate effective isolation processes to ensure safe work
Assessment criteria	9.1 Demonstrate correct and accurate record maintenance according to Network Operator requirements
	9.2 Demonstrate an ability to read and respond to Network Operator Service and Trouble Orders
Learning outcome 10	Demonstrate effective record keeping methods
Assessment criteria	10.1 Identify and demonstrate the correct re-energisation point for various installation types
	10.2 Demonstrate correct re-energisation procedures and confirm re-connection
Learning outcome 11	Demonstrate effective record keeping methods
Assessment criteria	11.1 Demonstrate the purpose and correct method and tools to undertake sealing of Network Operator equipment